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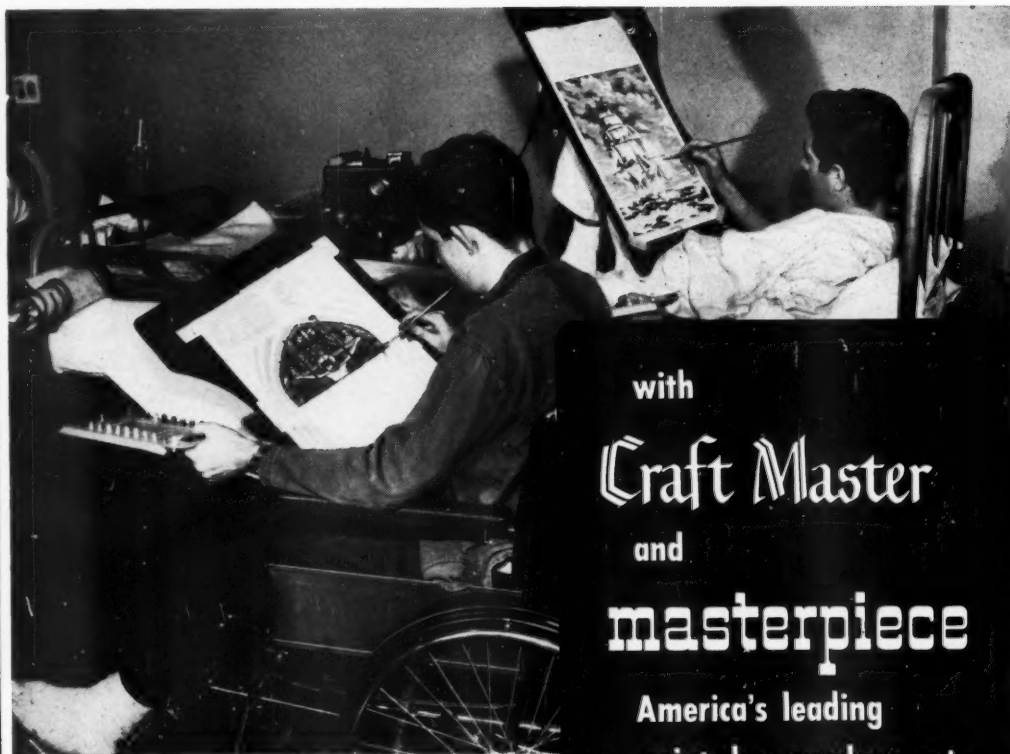
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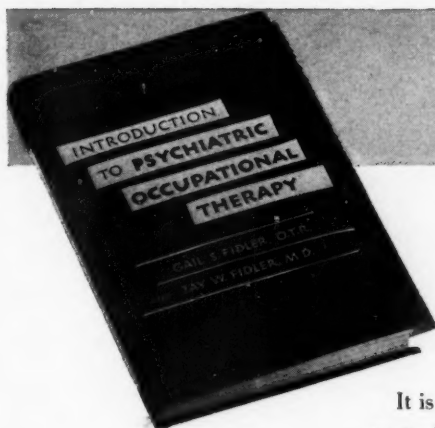
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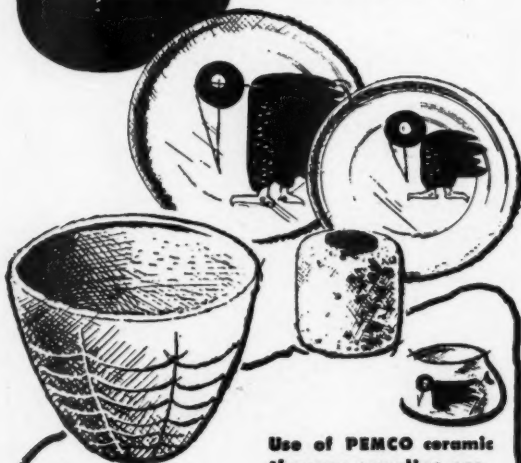
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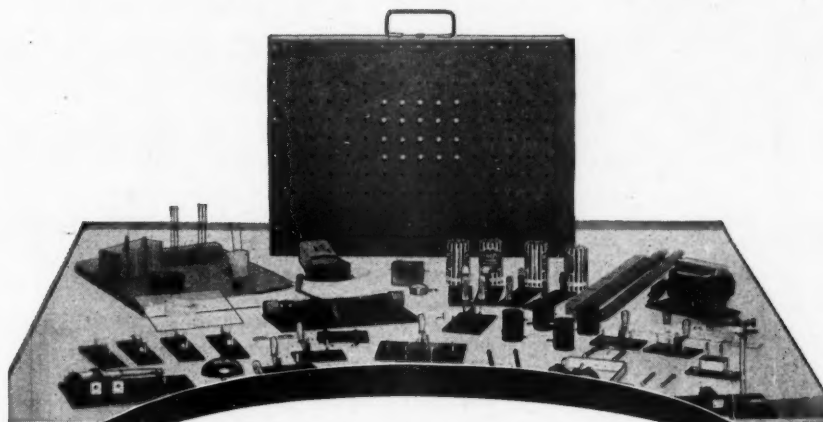
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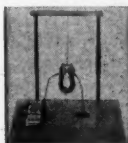
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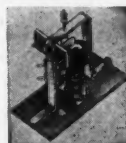
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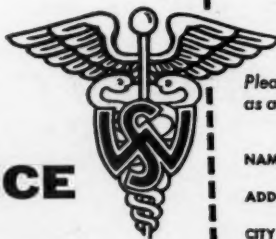
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Vol. VIII, No. 3

ONTOGENETIC PRINCIPLES IN THE DEVELOPMENT OF ARM AND HAND FUNCTIONS

A. JEAN AYRES, O.T.R.

The occupational therapist is frequently faced with the therapeutic task of encouraging the development or the re-development of arm and hand function in a patient. When this problem occurs in a neuro-muscular disability, the development of this function can be based on certain neurological principles. When the neuromuscular disability is an upper motor neuron lesion, as found in cerebral-vascular accidents, cerebral palsy, or other brain injuries, one of these principles can be ontogeny. Ontogeny refers to the development of the individual. That aspect of ontogeny that is particularly relevant to treatment to gain or re-gain arm and hand function is the physical development of head, trunk, arm and hand in the embryo, infant, and young child. It will be that phase to which this paper refers.

It is not suggested that ontogenesis provides the only basis for treatment plan in these cases. There are many other neurological precepts, such as the tonic neck reflex, which guide the physician and therapist in the administration of treatment. Many principles can be utilized at one time. For the purpose of clarity of thought and idea however, it is well to view the ontogenetic principle alone. It is also best to assume that the patient's response to this approach is satisfactory. It is recognized, of course, that seldom does physical medicine achieve such remarkable results as will be assumed in this presentation. At times there can be, at best, only a vague reference in the treatment program to ontogenetic development.

There is no proof that ontogeny presents the pattern on which to base this phase of rehabilitation. At this point we have only logic and empiricism to guide us. It has been reported that when spontaneous recovery occurs following a cerebral vascular accident, proximal segments return sooner than distal.² This is in complete ac-

cord with ontogeny. Literature^{10, 11} occasionally refers to treatment procedures which are apparently based on this approach, indicating an acceptance from successful use. It is, then, the purpose of this paper to review the early development of man and correlate it to occupational therapy procedures for a clearer understanding of the approach when this principle is used.

DEFINITION OF HAND FUNCTION

A therapist cannot work very long toward the development of hand function without realizing that there is much more to the process of grasping than a functional hand. A hand capable of grasping is of little use without a strong and co-ordinate wrist and forearm to place the hand in the proper position. The forearm, in turn, is dependent upon the humerus to position it. Similarly, the humerus is quite dependent upon the shoulder girdle for its support and direction. Without a stable trunk, the arm-hand unit cannot offer its best function. Normally, grasp is accompanied with visual guidance. The eyes, in turn, are somewhat dependent upon head placement. The functional unit might be likened to a steam shovel. The metal jaws which open to enclose quantities of dirt would be worthless without the framework which supports the shovel and accomplishes the task of moving the dirt from one place to another.

There are psychological conditions as well as physical conditions. Psychological conditions include the motivation within the brain to grasp and evaluate the object in advance as to weight, shape, and other nature effecting the type of grasp. These will not be considered here excepting to assume that this motivation and evaluation does exist and usually precedes the physical condition.

Physical components initiated in the total act of prehension could be outlined as follows: (1) eye

and head position for visual perception, (2) establishment and maintenance of trunk equilibrium, (3) shoulder girdle stability and motion, (4) humeral motion, (5) forearm rotation (supination-pronation), (6) wrist positioning, (7) digital action. In general, each of these components play a part in each phase of prehension. Each is dependent upon the former, barring abnormal conditions, such as blindness, use of supportive apparatus, etc. Phases of prehension might be divided into: (1) reach, (2) grasp, (3) carry, (4) release. So when speaking of the development of prehension on an ontogenetic pattern, we must consider the entire motor pattern development from head and eye control to digital release.

REVIEW OF ONTOGENETIC DEVELOPMENT

Two essential characteristics in embryological and post natal development are: (1) development takes place in a cephalo-caudal direction, and (2) development takes place in a proximal-distal direction. So the head of the embryo forms first, then trunk and arms, lastly legs and feet. Shoulders appear before arms and growth follows down the arm to the hand. Motor development appears in the same way. Reflex motion predominates in the prenatal and neonatal infant. Conscious control begins with the head and eyes, then trunk, next arm, and as the hand is developing conscious control, leg control begins. Prehension is quite well developed by the time the child is learning to walk alone.

A careful analysis of the development of the motor patterns of those components involved in hand function is necessary to understand the application of these principles to occupational therapy.

The new born infant is governed primarily by reflexes. Tonic neck reflexes predominate and position the head and arms. The Moro (startle) reflex causes a crude embrace. Reflex grasp is present, and it is interesting to note that the thumb is not included. This reflex appears at the 18th prenatal week and does not disappear until the 16th or 24th post-natal week.⁶

By the time the child is one month old he can raise his chin when prone. Although the tonic neck reflex is present up to the 20th week, head control has begun. At this point ocular fixation is vague, with one eye dominant. At two months of age both eyes fixate on moving objects, but the child cannot follow them well. At this same age the shoulder girdle begins to help raise the chest off the bed when prone. The child, at this age, is unaware that he has a hand. The grasp which occurs is still reflex and is typically accomplished with the two fingers on the ulnar side and the "heel" of the hand. The thumb is curled in and not used. At three months the infant is able to

maintain a sustained erection of the head with fine rhythmic bobbing. He is also able to turn his head when supine. He now recognizes that he has a hand and the first reaching responses begin. They are poorly directed and there is no contact between the hand and object perceived.

At four months of age the head can be held erect and in mid-position, but turning it while erect is difficult. Trunk stability has increased to the point where the child can sit with support. The eyes show the most advanced development. Convergence and focusing are fairly accurate and the eyes can follow a moving object with little or no difficulty. The child is still unable to get his hand to a perceived object. At this point conscious grasp has begun. It is the crudest kind of grasp between the palm and fingers, the thumb adducted at the side but not utilized to help in the grasp. The conscious grasp is just beginning to take the place of the reflex grasp at this stage.

Six months of age finds the first component of arm-hand function fully established. The head can be held erect and freely rotated. Maintenance of the head is effortless and automatic. The eyes now lead in taking hold of the physical world. Eye-hand coordination has been achieved and the child looks at what he is trying to grasp. With the head under automatic control, the head and arm postures are dissociated. The arms can be used asymmetrically with the head in mid-position. Increased trunk stability (can hold trunk erect momentarily) also gives better control of humeral motion. Reaching is a kind of "corralling" of the object. With the forearm pronated, the approach is paw-like. What little control there is comes from the shoulder and shoulder girdle. The elbow and wrist show little flexibility. There is almost no stability or predetermined positioning of the forearm or hand. Ulnar or radial deviation is not used.

Grasp at six months is still the crude palm grasp (holding objects by pressure at fingers and palm), with the fingers often encircling the objects, the thumb only incidentally used. "Corralling" is closely followed by a crude raking approach of the arm with the use of the mesial (index finger side) surface of the thumb. Although the child is not always able to grasp what he wants, approach and prehension have here become one (about 28 weeks). Note that conscious grasp began to develop about 12 weeks before this and conscious arm motion about 20 weeks before.

Early arm motion in reaching takes a circuitous route. The arm is lifted high, with the humerus sometimes abducted before the approach is made. At eight months the entire forearm and hand point at the object, aiming above it. The elbow becomes more flexible, but shoulder rotation is used rather than forearm rotation. The direction the arm takes becomes more refined with age. At 9 or 10 months an oblique or straight approach is used, with wrist

flexibility coming into the picture. The upper arm pattern is now pretty well established; the wrist patterns are just starting.

Grasp during these months shows the following development. The thumb and fingers learn to cooperate in holding an object against the palm of the hand. The cooperation does not yet result in opposition, but in a type of "scissors" grasp, utilizing the flexors and adductor of the thumb. The thumb envelops rather than manipulates.

At 9 months the scissors grasp is developing an oblique approach which evolves into a crude pinch. Also leading to the pinch is the use of the index finger in the extended position to poke things. With the establishment of pinch, opposition has finally been achieved and another component of hand and arm function has been established. Close upon this development and tied very closely with it is wrist control. It seems to follow a path parallel to development of grasp.

Up to this point (9 months) release has not been mentioned. Cortical control over finger extension takes place only after reaching and grasping have pretty well been perfected. It is difficult for the young child to inhibit the flexors. Up to this age release is usually accomplished either by unconscious relaxation of the flexors or by consciously pulling the held object against a resisting surface to release it. Adherent release of grasp is established at about 9 or 10 months⁶ and pincer release not until 11 months. Difficulty in releasing small pellets can be experienced as late as 3 years,⁶ indicating that this is one of the latest components to be established.

Since grasp is dependent upon finger extension to complete the cycle, it might well be asked how the very young infant opens his hand for the reflex or crude palm grasp. Since the motion is not under cortical control, it might presumably be automatic, responding as either part of the grasp reflex or from cortical motivation to grasp. Since release is one of the problems frequently encountered in therapy, this phase of ontogeny certainly deserves closer study.

Those who have so carefully observed the development of motor patterns in the infant have not had the interest in forearm rotation that comes with working with pathological conditions. Every therapist knows the importance of pronation and supination in normal function. It has been stated that they were the last movements learned by man and the last to return in case of loss of coordination.¹¹ Perusal of many photographs taken for the purpose of study of prehension³ reveals that pronation and supination do not have such a clearly defined pattern of development in relation to age as other upper extremity motions seem to. It was noted that occasionally a 24 weeks old child rotates the forearm, possibly inadvertently. General-

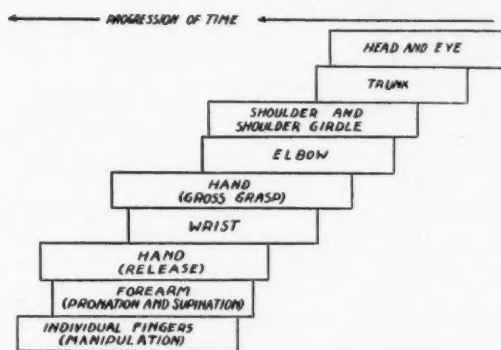


Figure 1. Diagrammatic presentation of ontogenetic principles used as a basis for the development of arm and hand function.

ly the young child uses his arm in the degrees between mid-position and pronation. Supination is seen more frequently around the 11th month. It seems to be definitely established as cortically controlled at 12 months and is seen consistently at 13 months. With the establishment of this final component involved in prehension, the child has all the essential motion patterns found in man. Of course it takes many years of experience to develop these motion patterns to the extent that complicated manipulation is possible.

APPLICATION TO OCCUPATIONAL THERAPY

The relating of this development process to occupational therapy can best be done diagrammatically. Figure 1 is a chronological treatment chart based on the ontogenetic patterns discussed above. The progression of time reads from the top of the page downward. Each column represents therapy given to achieve normal motor function of that particular part. Thusly one first encounters head and eye as the unit to first warrant the therapist's attention. Next comes trunk, and so on as ontogenetic development was encountered. One component of motion is not completed before the next is begun. The top of the column represents the simplest of that particular motor pattern, becoming progressively more complex as time progresses down the column. Thusly, when a therapist is in the middle of grasp development, finishing touches are being put on the elbow and shoulder motions. Trunk, head, and eye no longer receive any emphasis. Wrist motion is also in the middle stage of development, while forearm rotation has just started and the therapist is on the threshold of introducing individual finger action to enable manipulation.

On further analysis of the diagram, it is found that emphasis is placed on hand and eye control (as related to prehension) for a short time only before trunk stability is taken into consideration.

These two treatment objectives are carried along together until moderate control is gained. At this time the shoulder and shoulder girdle (which develop together in the infant) enter the treatment picture. The greater length of the column indicates that this unit requires longer periods of time for development. Elbow motion follows quickly and can well be treated almost simultaneously with the shoulder and shoulder girdle motion. It is represented thusly. By the time the therapist begins to encourage the development of simple grasp, the head, eyes, and trunk have supposedly been



Figure 2. The "ironer" offers a motion pattern similar to the earliest arm pattern developing in the child.

developed to the point where very little emphasis is needed. Motion at the shoulder girdle, shoulder, and elbow have been only initially established. Within each column, training would naturally go from the simple to the complex with the progressing of time. At the top of the hand grasp column, training would be a simple grasp not involving either release or wrist action. At the top of the shoulder and shoulder girdle columns, abduction and flexion of the humerus would receive emphasis; rotation of the humerus would not appear until the bottom of the column, as it is one of the most complex motions of the shoulder joint. At this time the simple grasp is being refined.

Gross grasp must receive even more attention than the shoulder girdle. At first no wrist motion or extension is involved, then wrist motion accompanies the development of grasp. At the same time the therapist is still treating arm and shoulder motion. Wrist motion in the normal child is apparently less complex and reaches a point of normal coordination before simple grasp. At this point it might be well to point out that the therapist will probably not prefer to take his patient through the exact ontogenesis of grasp. He will more likely prefer to use opposition at the beginning of grasp training.

After simple grasp has been well established, release must be begun. The length of the column indicates the length of time encountered in normal ontogenesis of this motion. It is not until all these components have been started that emphasis is

placed on pronation and supination of the forearm. In the normal child, cortical control over these motions is gained before complete control over release is obtained.

The final phase of the patient's treatment based on these principles is the development of individual finger action which leads to manipulatory ability, as is required in shoe tying, writing, or the handling of fine objects. This skill is developed slowly through activities performed by the growing child. Physiological development leading toward finger manipulation is not complete until around the 12th to 14th year. It is no wonder it comes slowly in the patient.

ACTIVITIES BASED ON THIS DEVELOPMENT PLAN

The use of ontogenetic principles determines the type of activities used to develop hand and arm function. Since many crafts involve the use of all the motion components through and including hand release, they are often not suitable treatment media until that column is reached. The needs of the patient with incoordination severe enough to match the early phases of motor development are best met with simple activities of a non-craft nature. The author feels that it is important for a patient being treated under these principles to focus all his attention on consciously developing the simple motor patterns one at a time. Too many extraneous demands made upon the patients' attention slow down the learning of the early, basic motions. As the patient nears the state in which he is capable of manipulatory motions (and uses, of course, all the previous components of motion), activities correlating all motions are highly advisable.

One of the child's first purposeful activities is shaking a rattle, done, at first, entirely with shoulder and shoulder girdle motion and reflex grasp. When he starts to grasp a simple object, the mere grasping is, in itself, all his motor equipment can do at that time. Early grasp is not correlated with arm motion. It is recognized that the child's activities are also determined by his mental development, which is something a therapist often does not have to consider. The simplicity of the equipment teaching the child motor control, however, may have an important lesson for therapists. Similarly, children's toys, geared to low-level motor development, offer many excellent treatment media, even for adults.

A few activities utilizing the different steps of development will be suggested. An object swinging at the end of a string and on which the patient focuses his eyes and attention will help develop eye control. Trunk stability can be encouraged through simple sitting or standing, preferably with resistance encountered. If no other means of of-

fering resistance exist, pulleys and weights can give it. The simplest shoulder and shoulder girdle activity (involving only reflex grasp) known to this author is the use of a hand platform on ball bearing casters, called an "ironer" because of its similarity in motion pattern. It is seen in use with the arm supported in an overhead sling in Figure 2. The rope attached to the apparatus is giving resistance by way of a pulley and weights. The "ironer" is also effective in early elbow motion. Where reflex grasp is not present, the hand may be fastened to the "ironer" by way of a mitten. A similar simple motion pattern involving more emotional motivation and without too many extraneous attention demanding aspects is sanding wood. Sanding blocks can either ignore forearm and hand use by tying the hand on to a block which requires little wrist stability. Planing, filing, and sawing are in the same category, usually demanding more wrist stability or motion. Notice that none of these activities demand frequent, conscious hand release or forearm rotation.

When release of grasp is begun, it is wise to choose the most simple object for learning, placing the emphasis on the simple release only, even to the neglect of the arm patterns for awhile. Here children's blocks are particularly handy. They provide various shapes for the development of simple grasp and release. When release activities are begun, grasp and wrist motions have only been well started. The latter must not be too complicated. When combined with shoulder motions, the therapist must be particularly careful that the patient can maintain conscious control over the actions, trying to make each motion as perfect in itself as possible. A piece of equipment well adapted to this is called the shoulder board, a vertically slanting board from which extend dowels on to which the patient slips hard cardboard disks or wooden blocks with holes in them. Thusly the patient practices simple grasp and release throughout the shoulder and elbow range, but still is not called upon to utilize forearm rotation or individual finger action. It is not until this point that weaving can be suggested as an appropriate activity. The relative simplicity of grasp and release in a pronated position with many repetitions make this an excellent activity at this point.

As mentioned earlier, the development of function in the supinators often presents a problem. There are few activities requiring simple supination and pronation alone. It might be advisable to start with a straight exercise requiring simple grasp only with no release in order to allow complete concentration on the act. This also offers control over other principles that might be utilized, such as giving resistance to the motion. When forearm rotation has been established well enough to combine it with motion in other parts of the

extremity, the complexity of the activities can be graded upward. Rood³⁰ mentioned a cross bar handle on a screw driver for primitive grasp. This would also encourage better forearm rotation than is often found in the action involved in using a regular screw driver. Some reamers have a "T" shaped handle requiring action similar to a cross barred screw driver. Some of the commercial children's toys encourage simple forearm rotation. An adult version of them can be made out of blocks to be picked up and turned over.

In the child a primitive grasp develops into a three fingered pinch and isolated finger motion starting with forefinger pointing. From this point, complete function of the hand evolves through experiences in functioning. Dividing this hand use development into two categories, simple grasp and manipulation, is merely a convenient means of putting therapy thought into black and white. There is really no dividing line.

When prehension has been developed to the point where the fingers can act individually to manipulate objects, the range of activities increases greatly. When adding any one of the above motion components, initial simplicity was stressed because it was felt that merely learning the motion was as much as the brain could handle at first. (When a child is learning to walk, his speech progress may slow down because learning two things at the same time is too difficult for him to grasp.) The use of simple children's blocks seems to meet the early manipulatory development needs. Games requiring the manipulation of various shaped blocks (such as the post office box with blocks) are made to order. The patient has little more than manipulation to think about.

There comes a time when the automatic control of all the combined motions can be started. Here many craft activities offer the ideal treatment. The emotional motivation plus intellectual processes necessarily take some of the attention away from the physical action. This is important in encouraging the developing of automatic rather than conscious control. Cord knotting is one activity placing emphasis on bilateral manipulation of the fingers but encouraging all previously learned motion patterns.

Press⁹ has listed many activities for hemiplegias based on classifications of degree of disability. Since degrees of disability follow an ontogenetic pattern, so, too, the activities seem to fall along the same line. The therapist will find many appropriate activities suggested in the article.

SUMMARY

Success through practical application and logic suggest the possibility of basing the development of hand and arm function in physical disability

(Continued on page 121)

INTERPERSONAL RELATIONS*

Source for Work Efficiency and Effective Living

BERNICE MILBURN MOORE, Ph.D.,
Consultant

Home and Family Life Education Service, Texas
Education Agency, and The Hogg Foundation
for Mental Hygiene, The University of Texas

"Occupational therapy" is the designation of your area of work. "Occupational therapist" is the professional title you carry. "Therapy" is the end in view of all you do. "Occupations" are the tools you use. You are members of the professional team dedicated to the development of actions and attitudes which will help bring those with whom you work into fuller participation with their fellow men. Improvement of interpersonal relations is your goal.

THE THEORY OF INTERPERSONAL RELATIONS

Insecurity, anxiety and aloneness which are accompaniments of physical and emotional illness, and observable differences because of physical damage or disability are blocks to effective living and efficient work. Aloneness and loneliness are unbearable to man. Whenever we help break the barriers of aloneness and loneliness, of insecurity and anxiety, by establishing new habits of action and new attitudes toward one's self and others, we are therapists of the highest order.

Harry Stack Sullivan, the great innovator of interpersonal theory in psychiatry, has said that therapy is not only the imparting of a new outlook in relationships, disturbed either by physical or emotional problems, but it also involves the reconstruction of the patient's entire milieu or environment. And, he would continue, that milieu is primarily the people with whom the patient lives and works. To Sullivan all other factors in environment are accompaniments to interpersonal relations.

Therapists, moreover, no matter what their position in the team, are always important "others" in the lives of those who are struggling to gain a foothold in the world of normal participation. They are anchors to the reality of living outside and above disabilities of one sort or another. Therefore a knowledge of interpersonal theory is essential to effective therapy no matter whether that therapy is psycho, social, hydro, physio or occupational.

All of living is between persons. All that is human in living is developed out of person to person association, interaction and communication. Personality, itself, is a product of interpersonal relations. Character is formed out of characteristics learned from others. Life itself results from

the interpersonal relation of the two who choose to become parents.

Sociologists say all of this in the often quoted phrase, "Man is not born human." Man is born with potentialities and possibilities, with flexibilities and adaptability, which make possible the development of qualities and characteristics that are distinctly human.

The humanness of human beings has been described by Eric Fromm as arising out of the fact that man is aware of himself as a separate and distinct entity. The infant becomes aware of himself as a "self" from those who teach him to become himself.

Man has the ability to remember the past. Man's memory of the past is developed by being taught to remember. Man develops his present out of his own past and the past of generations of men who have gone before. Man visualizes the future out of his past and out of each day's present, which is the past of tomorrow.

The human denotes objects and acts in symbols and carries on the business of being human through communication on all its levels. He learns symbolic communication as he learns to talk and is taught the language of his culture. The human has the power of reason to conceive and understand and change his world. He learned the use of reason as others reasoned with him. The human, through use of his imagination, "reaches far beyond the range of his senses," but his imagination has been released by others who have helped him see beyond his senses.

How human man becomes, how he thinks, what attitudes he holds, how he relates to others, depends upon the personalities surrounding him in his family where he is born. Family members literally translate for him and integrate into his being and doing, into his personality, into his character, what the culture in which he will live demands as human behavior.

Personality, as Harry Stack Sullivan has defined it, becomes the characteristic way one behaves or acts *with other people*. Charles Horton Cooley, the father of interpersonal theory in social psychol-

*Read at the 36th annual conference of the American Occupational Therapy Association, Houston, Texas, November, 1953.

ogy, described how these characteristic ways of behaving are developed. He called personality the "Looking-Glass Self." According to Cooley, each person looks into the eyes of others, sees reflected there how they react to him, and it is upon this judgment of what he sees—be it false or true—that he bases his behavior toward the others in his life.

From significant *others*—mother, father, family members, teachers, therapists; all who play paramount roles in life—characteristic ways of behaving are learned.

Nor does this say that every personality developed within a given culture is exactly as all other personalities. James Plant has pointed out in his *Personality and the Culture Pattern*, and again in *The Envelope*, that the culture we live in and the family, as an intimate reflection of culture, make for likenesses among men. But when we are born, innate differences help determine how each assimilates common experiences in this interpersonal world.

Potentialities for growth and development are not the same in every infant, though in most the potential is greater than is ever reached in a lifetime of living. The threshold of sensitivity, as Plant called it, seems to be neurological in origin and determines the depth and speed of reaction to stimuli. Cadence, or rate of maturation, appears to vary not only out of experiences but out of inborn characteristics. Rhythm or energy quotient—aside from nutrition, general health and training—appears to vary from individual to individual. And Plant would add, though Sullivan would disagree, that inward turning or outgoingness may be inherent. Body size and shape are always different except in identical twins, since no individual is ever a duplicate of the same combination of genes.

How these differences are modified, developed or accentuated depends entirely on the interpersonal experiences to which human beings are exposed as they grow. Experiences are, in themselves, different to a degree for each individual because no two children are ever born into exactly the same environment even in a given family. Family living is as dynamic, as changing, as developmental, in either a positive or negative direction, as is personal living. Personal living is, in fact, only an individualized facet of family and other group living.

Every person has personality unless he is deprived of living with even one fellow man. Every personality has an orientation toward himself and others arising out of how certain needs are met by *the others* in his life. To encompass all needs in two short words—they are the need for satisfaction and for security or self-esteem. Where these needs are not met satisfactorily, personality be-

comes oriented around frustration, fear and anxiety. "Characteristic ways of behaving with others" may be that of "clinging" or finding temporary security in desperately holding onto others, demanding to be loved but never loving. Interpersonal relations may be channeled into being a "taker" or an exploiter with security coming temporarily only in a feeling of power over others and of use of others to one's own advantage.

Again, the miser may develop—not only in the sense of worldly goods—but a miser in giving of self to others either in affection or service. Then there is the "super-salesman" who is always making a sale of himself and doing whatever he thinks it takes to "sell himself" to others who will be of advantage to him. Each of us has a bit of these orientations within our personality, but some have their primary relationship patterns along these lines.¹ Each of these orientations is defeating in itself since it can only lead to isolation and aloneness, as Harry Estill Moore, sociologist, has suggested.

Basic needs when met with tenderness, to use a Sullivanian term, tend to develop the productive, creative personality whose security lies largely in faith in himself and faith in his fellow man; in self-esteem and respect and esteem for others. He is a loving person and loves generously as well.

Love, as used here, is "the most creative of all human emotions," as Spurgeon English has described it. And love as used here has within it inclusiveness as broad as humanity itself and not the exclusiveness of the "romantic fallacy" too often depicted as *the only love*. Love—whether it is expressed in liking and respect for fellow men, whether it finds its outlet in love of mother for child, or in the erotic love of man for woman—has within it basic elements, again according to Fromm: care for others; responsibility and care for self and others; respect for self and others; and understanding and knowledge of self and others.

INTERPERSONAL RELATIONS AND THE OCCUPATIONAL THERAPIST

Whether each infant born into the world will develop into a healthy personality, as Lawrence Frank describes mental health, or remains a healthy personality through physical and emotional problems as he lives out his life, depends upon interpersonal relations. Early childhood is important. But so are all other phases of living. The principal of growth and development from birth to death is given validity by the dynamic quality of development from and through interpersonal experiences. Interpersonal experiences begin at birth and end, as we know them, only at death.

Occupational therapists are among the more important *others* in the lives of those who are

1. Indebtedness for this classification is to Eric Fromm in his *Man for Himself*.

struggling against emotional or physical odds to regain a participating role in the unprotected environment of everyday living. To say that the first requisite of the occupational therapist is a healthy personality, a productive and creative personality, is to say the obvious. However perhaps it would be well to call to mind certain basic attitudes which are essential to effective action with those in need of therapy; with those who work with us on our professional team; with those who make up our interpersonal field of activity in every association which we have.

This is only a way of saying that fundamental attitudes necessary for efficient work and effective living are the same, be they revealed in marriage or in therapy, in recreation, or in citizenship. Respect for self and others—respect arising not from *what we do* but from the very fact of *who we are*, human beings—has to be so ingrained in our attitudes that this respect is ever apparent in our actions.

Always we have to keep in mind that behavior is caused. Behavior is never something in and of itself, apart from the whole growth process which has taken place in interpersonal relationships all along the line. Behavior may be accentuated in certain highly charged circumstances but its fundamental causes lie in and are produced from present as well as past experiences.

While basic needs of all of us are the same, specific needs may arise which are different for each of us. We cannot always judge the validity of the need of another by how we ourselves feel. We have our own special set of needs which may appear equally invalid to others.

All problems, so Norman Maier, Harry Stack Sullivan and others tell us, arise out of misunderstandings between personalities. Sullivan has said no problem ever existed which was not between two or more persons even if all save one were imaginary. Again he reminds us that misunderstandings tend to have a "fly paper quality"; the more we try to explain away some misunderstandings, the more involved we may become. Perhaps action should always be used along with words when misunderstandings arise, or even in place of words. Judgment of others is not our prerogative. What behavior we encounter should always be read for its meaning in terms of needs which we may help alleviate.

Tenderness, Sullivan says, is sensitivity to others' needs and the gaining of pleasure and satisfaction in attempting to meet these needs. Nowhere is tenderness, in this sense, more necessary than with all who participate in the team play of therapy.

Tolerance of difference, recognition of the right and the fact of difference, is essential for anyone who works with others. Each is different as to abilities and potentialities, as to experiences, as to

reactions, as to capacity. Differences should never be judged as good or bad. But feelings are something we have in common. No matter our differences, we can all be hurt or made to feel secure.

Interpersonal research and theory has never given a finer concept to those who are in action fields than that we, ourselves, are a part of every situation in which we participate. Since therapists are the most important human element in the situation with patients, then it is essential that each of us see ourselves and the effect we are causing before we see others and the effect they are having on us.

Frustration, apathy and even conflict may be mitigated if not eliminated by changing the situation through a subtle or overt change in our own behavior. Many times what we blame on others, or what we blame on the situation, might well be avoided if our own role in interpersonal relations were under constant surveillance by ourselves.

Closely related to the ability to see one's self as a part of every situation is the priceless gift of empathy. Leonard Cottrell, the social psychologist, has called empathy communication through emotions. Empathy may also be described as the sensitive art of being able to place one's self in the shoes of the other. Then we act according to how we know another would feel in regard to our actions.

Finally our attitudes, expressed through action and human interaction, must always say to others, "I firmly believe that everyone wants to be a constructive, productive, and creative member of society." Nowhere is this more important than in the therapist-patient relationship. Robert L. Sutherland, director of the Hogg Foundation, has said that this implies the belief that none of us, so-called normal or otherwise, want to be "served" by others. What we all desire is to be helped to help ourselves.

Still further evidence of this essential feeling about others is the insistence Eric Fromm makes that within every human being is a powerful drive toward creativity and productivity. And Harry Stack Sullivan reinforces this same idea when he expressed his basic faith in the desire of man to make progress through effort, imagination and good will.

All of this adds up to a final statement for therapists in particular and for everyone in general: Sensitivity to needs—or the ability "to listen with the third ear" as Theodor Reik calls it—should be assiduously cultivated. The person with the least paramount problem in the situation is the one to alter his pattern of interpersonal relations. By changing his behavior, he thus changes the situation for the person with greater need and least resources.

OCCUPATIONAL THERAPY TOWARD IMPROVED INTERPERSONAL RELATIONS

Therapists are always participant-teachers. They participate in a situation by their attitudes translated into action. They teach their own particular occupational skill. A feeling of self-esteem and self-confidence is eventually achieved by the patients learning these skills (which may in truth one day become an occupation in the economic sense of the word) in an emotional climate conducive to satisfaction and security. And this self-feeling of worth is a far step toward a healthy personality no matter how damaged the anatomy or the emotions.

Occupational therapy helps the person attempting to overcome or to learn to live with a problem keep in touch with the reality of creativity and productivity. By actually learning to produce something tangible and material, a vital step is taken in resuming creative and productive relationships.

Moreover a whole area of communication other than on personal problems is opened up. Areas of communication are circumscribed for the ill or disabled by limits upon their experience and participation. When common interests pervade a group, when these interests are molded into objects which can be seen, there is something at hand to talk about. Re-teaching intercommunication is a product of an occupational therapy group which may be overlooked. Many times those who work together come to have something, other than themselves, to communicate about.

All living is action, Eric Fromm insists. Occupational therapy takes place in a situation controlled to meet limitations of those at work. Release of anxiety from inactivity caused by illness or disability takes place through the channel of actually doing and making things in a setting conducive to successful operation.

The occupational milieu—the physical set-up but the emotional environment to a greater extent—is in itself therapeutic. Being in a group is in itself important for improvement or recovery. Though sitting apart or even working individually, group acceptance by the individuals in the group begins to come about. Aloneness and loneliness is dissipated by the very fact there is someone to whom one may talk even if one does not want to talk. One can be isolated in a group it is true. However if there is communication and response only between the therapist and the patient, a first step has been made back into group activity. Whenever there are two or more persons together, potentiality for group processes exists.

Occupational therapy offers still another important contribution to improvement in interpersonal relations. Group association, in a productive at-

mosphere, makes possible gains not only in competence in an "occupation" but gains in competence in relationships which are always a part of any occupational situation.

When a person is placed in a group setting with something productive or constructive to do, this person learns by this very fact that "each of us has within us the ability and capacity to surmount almost any circumstances which may befall us." And when we do not, Sullivan remarks, in the majority of instances an element of self-indulgence enters into the situation.

Occupational therapists are members of one of the more important teams working toward competent, happy, mentally healthy personalities. Through their tenderness, their ability to sense needs and to gain satisfaction in helping meet these needs through their own highly developed skills, they are doing their share and more in helping re-establish interpersonal relations which are satisfying and sustaining. As this end is achieved for others, from such interpersonal relations comes a self-fulfillment for the therapists attained in no other way; the self-fulfillment of maturity which is greater concern for others than for self.

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THE VALUE OF CRAFTS IN PSYCHIATRIC OCCUPATIONAL THERAPY

PATRICIA D. NISWANDER, O.T.R., AND
ROBERT W. HYDE, M.D.
Boston Psychopathic Hospital

Every patient in the Boston Psychopathic Hospital comes to the occupational therapy department sometime during his hospitalization. Inasmuch as the whole environment of the hospital is permissive, no craft is pushed upon a newly admitted patient. We talk to the patient and encourage him to participate in the various functions, but the choice of crafts is left up to him as much as possible. In an atmosphere such as this, little or no structuring of patient choice is done. It is therefore important to determine if possible whether the patient's own choices are beneficial. This study is to find out what crafts women patients chose to do, and the needs they expressed in choosing them. For the purpose of this study, we define meeting of needs as giving them maximum satisfaction.

The occupational therapy department is divided into four main rooms: a recreation room and greenhouse, a carpentry and electrical shop, a library, and a textile craft room. The following project was done in the textile craft room.

The women patients come to the shop daily at 8:15 a.m. and are working by the time the occupational therapist arrives at 8:30 a.m. Since socialization has been stressed as part of the treatment program, a fact of which the patients are aware, the women tend to work in groups, the chairs often being placed in a circle before the therapist arrives.

Upon arriving at the hospital, each patient is told what is available in occupational therapy and for him to help himself to materials. Whenever he desires help the therapist is available for suggestions, teaching and for socialization.

The method of observation was as follows. A student volunteer was trained as an observer. She entered the room five minutes before the actual test period began in order to make herself a neutral factor in the group. After the five-minute period was over, the therapist entered the room and carried on her regular functions as co-ordinator of the group. For the next fifteen minutes, the observer recorded all interactions of the group, both verbal and non-verbal, summarizing these at the end of the period. Questions to be answered were:

1. What craft was each patient working on?
2. How was the craft initiated: By the O.T. department? By the patient herself? By other patients?

3. How good was the craftsmanship of each patient?
4. How much was each patient actually engaged in what she was doing? (Engagement means complete concentration in work with a negation of external stimuli.)
5. Did the patient seem to like or dislike what she was doing?
6. Was there any progression of skill noted?
7. Did the patient show initiative in her work?
8. Did the craft seem to be meeting the patient's needs?

After the observer recorded her own answers to these questions, she interviewed each patient, asking the same questions. Finally, the therapist was interviewed on the same points. The combined data from these three sources was recorded on a large master sheet, facilitating the analysis of the material at the end of the project.

Sixty women patients were observed from one to three times, over a six-months period. Their ages were from sixteen to fifty-seven years. The predominant diagnosis was:

Schizophrenic reaction, paranoid type—23 cases

Others were:

Involuntary psychotic reaction	8
Schizophrenic reaction, catatonic	8
Manic depressive reaction, depressed	7
Manic depressive reaction, other types	3
Psychoneurotic reaction, other types	3
Schizophrenic reaction, other and unspecified types	3
Personality disorders	3
Paranoia	1
Psychoneurotic disorder, conversion reaction	1

Total60

Table 1 shows the number of patients engaging in each of the tasks and whether they selected the task or it was selected for them.

The most popular craft was knitting. Twenty-seven women were working on this when the observations took place. Nineteen of the 27 initiated the craft themselves. In the remaining 8 cases, initiation was divided equally between the occupational therapist and other patients. In 17 of the 27 cases, knitting was found to be part of the cultural background of the patient, that is, it was "natural" for the patient to knit because she knew how. Reasons given by the patients for

TABLE 1
Crafts Engaged In

Craft	Chosen by Patient	Chosen by Leader or other Patient	Total
Knitting	19	8	27
Millinery	3	12	15
Sewing	7	0	7
Bandage Rolling	1	4	5
Pottery	2	1	3
Other	1	2	3
Total	33	27	60

choosing the craft were, in order of number:

1. It was familiar to patient before entering the hospital. (17)
2. It was something familiar to grasp in the new and strange environment of the hospital. (12)
3. Eleven of the 27 said they liked to knit as they could do this and talk at the same time.
4. Eight of the 10 patients who didn't know how to knit before entering the hospital, wanted to learn how to knit to take something new in a skill home with them.
5. The other 2 of the 10 just wanted "something to do."

The next craft in popularity was millinery. This was a special class held on two successive days, and taught by two volunteers. Fifteen women joined in the class the day the observation was made. Reasons given, in order of frequency, for choosing this craft were:

1. A new hat was needed for Easter. (8)
2. It looked like fun. (8)
3. To see if she could do a better job than her neighbor. (This factor of competition in crafts will be discussed later.) (5)
4. It would be practical to learn how to make hats and save money on the outside. (4)

Sewing was the third most popular craft. In every case of the seven who chose it, this craft was initiated by the patient herself. Both embroidery work and dressmaking were included under this category. Reasons for sewing were as follows:

1. It was familiar to all 7 before entering the hospital.
2. Three who were familiar with dressmaking were inspired by O.T. patterns and materials.
3. Embroidery was done because they wanted to make table and bureau scarves for the wards they were on. (3)
4. Five of the 7 women said they enjoyed sewing as they did not have to concentrate on it too much and could talk and sew at the same time.

Bandage rolling was chosen by 5 patients. It was initiated in all but one case by the therapist. In all but 1 of the 5 cases, the patients were older women who had not previously shown interest in crafts. One case was a post-lobotomy patient of six days' duration. Reasons given by 4 of the 5 were as follows:

1. It helped pass the time. (4)
2. The above 4 felt they could do this easy task where they weren't able to do other kinds because of bad eyesight and lack of concentrating powers.

3. Two of the 5 felt they were helping to pay back the hospital in a small way.
4. The fifth patient, the post-lobotomy, was mute at the time and no response could be obtained.

Pottery was made by 3 patients during the observations. Two of the 3 initiated the craft themselves, and in one case it was initiated by the occupational therapist. The patients liked pottery because:

1. It was something new to do. (2)
2. Ashtrays were needed on the wards. (3)
3. One wanted to follow it up on the outside as a hobby, and sat in on the classes to learn more about it.

Textile stenciling was done by 2 women during the observation periods. It was initiated in both cases by the therapist. Both were young girls in their teens, who had been at the hospital for several weeks. In both cases they liked it because it was something new to learn when they were bored with the usual crafts.

One patient chose crocheting herself. She said she liked doing this craft as it was familiar to her and she did not have to concentrate too much on it.

Table 2 is a summary of the outstanding reasons for choosing activities which points up the prime motivational factors.

TABLE 2
Reasons Patients Chose Activities

Familiarity (something to grasp in the new and strange environment of the hospital)	13
Social medium (something they could do and talk at the same time)	11
Voluntary service to the hospital	4
Total	28

Other facts which were determined during the observation and interview periods were as follows. The craftsmanship varied with whoever initiated the craft. Those who picked the craft themselves, 33 cases out of 60, showed a knowledge of the craft. When personnel of the occupational therapy department or other patients initiated the craft (as occurred in 27 cases) the patients lost interest in it if no progression of skill was noted or if they did not receive praise or encouragement. The patients who initiated the craft themselves were more apt to continue it longer, had more sustained interest in it and became more skillful. They were not as dependent on praise or encouragement.

All but 5 of the 60 patients liked the crafts they were doing. Four of the 5 were doing it for "something to do." The other was doing it because even if she disliked it, it was "good for her."

It seemed the patients, consciously or unconsciously, set standards for their craftsmanship, and if their work did not measure up to their standards after a certain time, it was dropped. This was especially true of the 27 who had crafts chosen for them. Of the 33 who selected their own work, only three did not progress in skill. These

3 patients were completely familiar with the crafts before admission but their illness and treatment had made them forget the technique.

No analysis or evaluation of each patient's needs was made prior to the project. However upon interviewing the patient, therapist and observer, it was found that at least one of these 3 thought the patient's needs were being met in 55 out of the 60 cases. In each of these 55 cases the patient liked the craft. This suggests that the liking of a craft should be considered important in setting up a program to meet a patient's needs.

A student* was engaged in a project on competition in crafts at the same time the above observations were made. The student observed that competition was found in groups working at the same thing, rather than where different crafts were done and the group relationship less evident. By direct interview she found that 12 out of 22 patients thought there was a formal or informal competition in all crafts. The patients' definition of competition was that they had a desire to keep up with others on their own level of work. Five others were noticed watching each other's work. It was noticed by both the student and the writer that the millinery class brought out more open competition than any other group. Possible reasons for this were:

1. It was a new craft to all and there were not the usual selective few who were good at it to begin with.
2. There was a gay, informal atmosphere in the room leading to a feeling of "joie de vivre" in everyone which might have encouraged competition.
3. Perhaps women everywhere compete over hats.

As the millinery class progressed, competition increased, and those who had natural creativeness and imagination made hats noticeably superior to those who possessed these qualities to a lesser extent.

DISCUSSION

It is seen that in most cases the patients liked best those crafts with which they were familiar before they entered the hospital. They found a definite sense of security in doing those things which they were used to in the new and strange surroundings. To work at and think about old familiar things may furnish the psychotic patient an anchor in reality in an unrealistic or confused world.

They liked best and worked with most skill at those things which they chose for themselves. This suggests the importance of permissive attitudes on the part of the occupational therapist. The increased need of those whose work was chosen for them for encouragement and praise suggests that dependence was being fostered.

The degree to which crafts were chosen or engaged in as a part of socialization was impressive. It seemed the important factor in choosing crafts

in fully half the cases. Choosing the craft which didn't interfere with talking points out the value of crafts, not for the craft itself but as a medium in social relationships. We see patients talking together while knitting who would feel uncomfortable talking to each other without knitting. Here crafts act to dilute the impact of social interaction and permit the socially fearful to learn to get along together by easy stages. The fact that crafts requiring too much concentration were rejected seems an important point in occupational theory and practice.

A small percentage of the women enjoyed doing things for the hospital like rolling bandages. Often it was something they knew was needed on their ward like table scarves or ash trays. Many of these were older women who felt they were helping pay back the hospital in some small way.

Some expressed the need to learn something new and interesting to do at home after discharge. They felt that this might help combat the strains of the social environment that had been partly responsible for their hospitalization. Many said they didn't have enough to do at home so just "sat and moped" and got sick. They felt that these new interests might help the situation.

Many patients who chose those activities with which they were familiar when they were acutely ill, early in their hospitalization, shifted to learning something new when they were in the convalescent stage of their illness. It is possible that we should consider a sequence of task choice from the familiar to the new related to the patient's progress toward recovery.

SUMMARY

The crafts chosen most frequently by a group of 60 women patients at the Boston Psychopathic Hospital, were knitting, making millinery, sewing, rolling bandages, pottery, textile stenciling and crocheting in that order.

A simple method for studying the motivation for craft choice was applied to the study of the 60 patients with the following findings:

1. That familiarity of the craft was important not only in the patient's liking for it but also in the craftsmanship and degree of sustained interest.
2. That crafts which did not require a concentration that interfered with socialization were chosen for this very reason, showing the need to consider the task as a medium for socialization and avoid those which interfere with social growth.
3. That permitting the patient to choose the activity he desires produces more sustained interest, better craftsmanship and less dependence on approval.
4. Learning new skills is important particularly after patients have made a successful hospital adjustment.
5. Doing something for the hospital is important for some patients "to pay back the hospital." This is particularly important when they can see the need as their own reward for what they are making.

*Miss Rosalie Rankin, Boston School of Occupational Therapy.

FUNCTIONS AND USE OF APRL TERMINAL DEVICES

NORMAN BERGER, M.S.*
MARSHALL A. GRAHAM, M.S.*

For the past six years, an extensive research program has been conducted in the field of prosthetics under the auspices of the advisory committee on artificial limbs (ACAL) of the National Research Council. The purposes of this program have been to develop improved artificial limbs for the amputees of this country and to evaluate these new developments in accordance with standards of use which are direct outgrowths of extensive amputee contact.

Two of the most successful devices which have passed the rigid requirements of the research program, and have been approved for distribution to amputees, were developed at the Army Prosthetic Research Laboratory (APRL) in Washington, D. C. The APRL hook (see Figure 1) was approved by the ACAL in May of 1950 and has since been made available commercially.¹ The APRL hand with cosmetic glove (see Figure 2) was approved in May of 1951 after a nationwide field test involving 80 amputees.² These hands are also available to amputees through local limb-shops. Upper extremity amputee veterans of the Korean conflict are being routinely fitted with both of these APRL devices.

The purposes of this paper are to describe the functions of the new APRL devices and to present a training program for amputees who receive one or both of them for use. The importance of such a training program was emphasized by Mr. Chester Haddan, past president of the Orthopedic Appliance and Limb Manufacturers' Association, who stated that, "... another phase that is being sadly neglected is training the amputee in the use of his device. That is particularly true of the newer devices that have come out of this research program. He must have more training if he has been using a conventional device."³

This paper will deal primarily with the techniques used in orienting amputees to the features of the two devices mentioned above and in training amputees in their use. Although originally developed for use in training amputees who have worn conventional hooks and hands, the following program can well be used with amputees who wear an APRL device as their first prosthetic replacement. However it should be pointed out that amputees, whether or not they have worn prostheses previously, may need training in control of elbow flexion, elbow locking and unlocking, and other prosthetic functions. Such instruction should precede training in the use of the terminal device.

Training drills should be one hour in length, although this estimate is not to be considered a

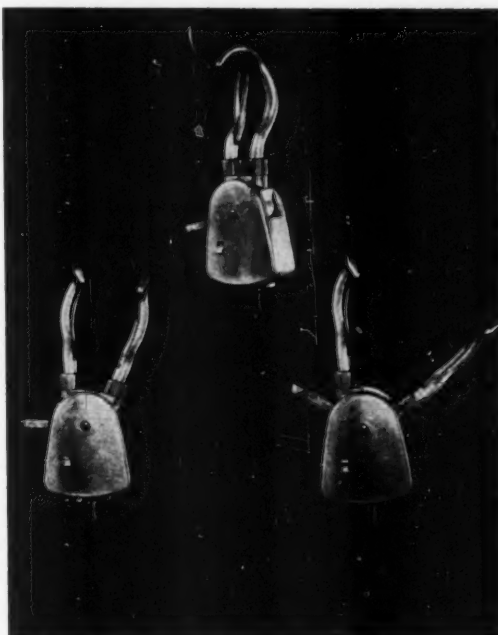


Figure 1. APRL Hook

Lower left: small prehension opening—lever rearward

Lower right: large prehension opening—lever forward

Upper center: hook fingers closed and locked on object

rigid requirement but rather a flexible suggestion which will vary with the individual patient. The number of training sessions for any one amputee will also vary, although for most (who have worn conventional hands or hooks and require training only in use of the new terminal device) one to three sessions should be sufficient.⁴ Before initiating training, the therapist should check the amputee to insure that his prosthesis meets minimum standards for adequate harnessing and fitting.^{5, 6}

The training program in the use of APRL terminal devices can be divided into three phases: (1) orientation to the features of the device, (2) instruction in basic principles of operation through grasp and release drills, and (3) practice in applying basic operations in practical activities of daily living.

*Staff members of the Prosthetic Devices Study, Research Division, College of Engineering, New York University, 252 Seventh Avenue, New York 1, N. Y.

ORIENTATION

The outstanding features of the APRL devices which should be described and demonstrated to the amputee before actual training in use begins, are as follow:

Large and Small Prehension Openings

1. **Hand:** The APRL hand has two thumb positions which control the size of the prehension opening. It has been found that the majority of activities performed by amputees can be accomplished with the smaller opening of approximately $1\frac{3}{4}$ inches. The larger opening of approximately $2\frac{3}{4}$ inches is needed in some few activities such as holding a glass tumbler.

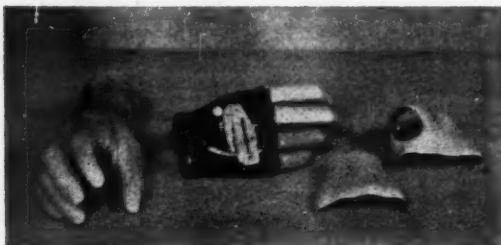


Figure 2. APRL hand with cosmetic glove and with cover plates removed.

To change the prehension opening from the smaller to the larger, it is necessary to push the thumb toward the palm and then release it, allowing the thumb to spring out to the wider position. To convert back to the smaller opening, the thumb is simply pushed toward the palm until it clicks into place.

It is important to remember that the fingers of the APRL hand can make contact with the thumb only when the thumb is in the smaller opening position. Contact between the thumb and the fingers is not possible with the thumb in the larger opening position. This means that small objects, up to $1\frac{1}{4}$ inches in size, can be grasped only by use of the smaller opening.

Note: When converting back to the small opening, the amputee will often push the thumb too far toward the palm (past the click), in which case the thumb will spring back to the large opening position instead of clicking into place in the small opening position.

2. **Hook:** The hook also has a large and a small prehension opening available at the choice of the amputee. The choice is controlled by means of a small lever set into the top of the mechanism housing (see Figure 1). With the lever set rearward, the hook fingers will open to a width of $1\frac{1}{2}$ inches (small prehension opening) while with the lever set forward, the fingers will open to a width of $3\frac{1}{2}$ inches (large prehension opening). In addition, the hook incorporates a third lever position (midpoint) at which time the locking mechanism is disengaged allowing for "free-wheel-

ing" with a prehension opening of $1\frac{1}{2}$ inches.

Contact of the hook fingers is possible in all lever positions, although it behooves the patient to utilize the small opening whenever possible since less excursion is necessary for complete closure, resulting in less energy cost for operation of the hook.

Note: The position of the lever should be changed only when the fingers of the hook are completely closed. Observance of this rule will greatly prolong the life of the mechanism.

Voluntary Closing

In contrast to most conventional devices, shoulder action or forward motion of the arm (whichever the amputee normally uses) *closes* the fingers of the APRL devices.

Finger Pressure Control

Since the amputee is closing the fingers of the hand or hook with his own body power (shoulder shrug or forward motion of the arm) he can stop closure at any point and exert as much closing pressure as he desires. These finger pressure controls make it possible for the amputee to get hold of the most fragile objects without fear of crushing, yet he is able to exert considerable gripping force when necessary, more in fact than a normal hand. It is important to avoid overpressure when grasping light objects as it merely wastes the amputee's effort.

Self-locking

After the shoulder action or forward motion of the arm closes the fingers of the hand or hook, the fingers will automatically lock in place with a slight click as soon as the amputee relaxes. The fingers will remain locked until the shoulder or arm motion is repeated to release the locking mechanism.

One point to remember is that the fingers will not lock unless the device has been activated from the fully open position. This means that the amputee must release all pressure from the control cable; that is, relax completely after each shoulder or arm motion.

A typical closing, locking, unlocking and opening cycle would be performed in the following manner:

1. To close on an object, shrug the shoulder and/or move the arm forward.
2. To lock the hand or hook, R-E-L-A-X (listen for the click).
3. To unlock, shrug the shoulder and/or move the arm forward.
4. To allow the fingers to open, R-E-L-A-X. *Make sure that the fingers are allowed to open fully.*

These operations are the same for both the large and the small prehension openings. When unlocking the fingers (step 3 above), the control motion must apply a slightly greater pressure on the control cable than was applied by the control motion which closed the fingers (step 1).

Note: (See Figure 3) If the amputee has difficulty in allowing the fingers to open fully, the therapist should make certain that there is adequate clearance (1/2 inch) between the hanger clamp (A in diagram) and the proximal end of the cable housing (B in diagram) with the hand or hook fully open and the elbow fully extended. If this safety margin is present and the difficulty persists, the control cable may be too tight. The adjustment buckle (C in diagram) can then be loosened.

Grasp and Release Drill

When orientation has been completed and the amputee understands the features of his new device, training proceeds to the second phase. Since the major functional difference between the APRL devices and most conventional devices is in the closing and locking mechanism, the second step in instruction concerns this action. To give the amputee practice in grasping, locking and releasing, a series of geometrically shaped objects made of compressible (rubber) and non-compressible materials is used together with a placement board (see Figure 4).

The board is placed on a desk or table of average height. The amputee is instructed to grasp and lock on each compressible object in turn. His grasp should be so light that the surface of the rubber is not noticeably deflected. The objects are placed on the correspondingly shaped spots on the placement board and released from the hook or hand. The same procedure is followed with the non-compressible objects. The sizes of the objects are such that the patient must alternate between the large and small prehension openings as the need arises.

For his first attempts the amputee should pick up each object in turn *with his normal hand* and hold the object while the fingers of the artificial hand or hook close upon it (see Figure 5). As facility in operating the terminal device develops, the amputee should practice the more difficult task of picking up the objects directly from the table without the intervention of the sound hand (see Figure 6).

As the amputee attempts to grasp the variously shaped objects, difficulties in hand dexterity may be encountered. In such cases some advice by the therapist is in order. For triangular shapes it is suggested that the patient place the thumb of the artificial hand against one flat side of the triangle and close the fingers so that the apex of the triangle falls between the two moving fingers. The same points on the object should be grasped by the fingers of one hook. For the very flat objects, difficulty will be encountered mainly with the hand. It is suggested that the thumb be placed against the nearest edge of the object and that the elbow be raised so that, as the fingers close, they remain close to the table and can grasp the edges of the object. The tall, cylindrical objects can



Figure 3. Rear View of Above-elbow Amputee.

best be held as one would a glass tumbler, with the fingers wrapped about it.

The amputee should be cautioned that the heavier the object, the greater the force that must be applied to provide a firm grasp. However it is not wise to exert too much pressure. In order to release the object from the terminal device the same amount of pressure which was originally used to grasp the object, plus a slight additional force, must be applied (meet-the-load principle). If excessive pressure is used to grasp the object, releasing it becomes more difficult.

One essential point to be stressed repeatedly is that *whenever the amputee attempts to operate one of these devices he must relax all tension on the control cable* after grasping or releasing an object. If there is difficulty in achieving this relaxation, ask the amputee to shake his shoulders to make sure that all tension is removed from the hand or hook control cable. It is important to relax each time since the terminal device will not lock unless the closing motion is started after the fingers are allowed to open to their maximum.

As the amputee develops proficiency in proper operation of his device, he should be requested to remove several objects from the placement chart and put them on the floor. He should then take them from the floor and put them on a shelf at shoulder height or above if possible. These and other simple variations of the grasp and release drill serve as a stepping stone to the next phase of training and provide an opportunity to check the adequacy of the harness and the cable control system. The amputee should be able to close, lock, unlock and open the hand or hook at the

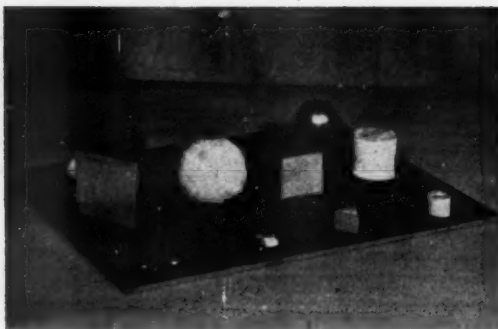


Figure 4. Placement board and objects for grasp and release drill.

floor, waist, mouth and shoulder levels. These operations should be performed without undue strain or difficulty.

If the terminal device does not function properly in all of these positions, harnessing should be checked. The control cable and/or harness straps may be too loose or too tight, there may be sharp bends in the control cable causing excessive friction between the cable and the housing, or the cable housing may be too long. The amputee should be referred to the prosthetist for any needed corrections.

The amount of time that each patient will spend on the grasp and release drill will depend on his own facility in operating the APRL devices. It is to be understood, however, that no patient should proceed to the practical application of basic techniques until, in the opinion of the instructor and in the amputee's own opinion, he has adequately mastered the fundamental operations which are involved in the grasp and release drill.

Note: During the grasp and release drill, it is most important that the therapist be alert to the causes of any failures of operation which may occur. Only as the therapist discovers these can he or she be of real help to the amputee. The most frequently encountered and most important errors of operation that must be watched for are:

1. The amputee closes the fingers on an object but cannot open the fingers and release the object despite repeated attempts. This difficulty results from failure to relax cable pressure sufficiently for the lock to operate. The amputee will not be able to unlock the fingers until he has first relaxed cable pressure. Remember that the slight click when the lock is activated provides the amputee and the therapist with an auditory cue to correct operation. If sufficient relaxation has occurred and the click of the lock is heard but the fingers still do not open, the amputee simply has not applied enough force with his control motion to release the locking mechanism (meet-the-load principle).
2. The amputee closes the fingers on an object and then relaxes to activate the automatic locking mechanism. The lock, however, fails to operate and the fingers fly open, allowing the object to drop. In such a case, the amputee has not started the closing motion from the fully open finger po-

sition. Remember that the lock will not operate unless the fingers are first allowed to return to the fully open position.

PRACTICAL APPLICATION OF THE APRL DEVICES

The basic drills which teach the amputee how to use the APRL devices are excellent for learning the principles of operation. However it is equally important to give training in the performance of



Figure 5. Grasping Objects from the Normal Hand.

everyday activities. Training of this sort demonstrates to the amputee the application of his prosthesis to a wide variety of tasks. He may thereby gain confidence in his prosthesis and in his ability to use it. Training thus produces maximal benefits from the devices by encouraging the amputee to attempt many new activities and motivating him toward extensive use of the prosthesis.

The activities selected for use during training in practical applications should be realistic and meaningful to the amputee. In this connection it should be realized that because of the limitations inherent in any artificial appliance, activities that can reasonably be performed with one hand will be accomplished with the sound hand rather than with the artificial device (this, of course, applies only to unilateral amputees). For this reason the activities suggested below either require the use of two hands or are more socially acceptable when performed bimanually. Training in the performance of these tasks should be a definite part of the training procedure for all amputees. Most of the props for these activities can be made readily available in almost all situations.

The following activities have been found by the

authors to be of value in demonstrating to amputees the functional potentialities of their APRL devices:

1. Filing finger nails
2. Unscrewing caps or lids of tubes or jars
3. Cutting meat with knife and fork
4. Playing cards
5. Opening a pocket knife and whittling
6. Assembling a male electrical plug
7. Taking notes over the telephone
8. Handling and lighting cigarettes
9. Sharpening a pencil
10. Helping someone on with a coat
11. Carrying (suitcase, package, and overcoat at the same time)
12. Tying a necktie
13. Unbuttoning shirt sleeve
14. Sweeping up dirt (broom or brush and dust pan)
15. Opening bottles or cans
16. Cleaning eye glasses
17. Using tools (hand drill, plane)
18. Taking bills out of a wallet
19. Assembling papers and clipping them together
20. Carrying a tray

In assisting the amputee to perform these activities, the therapist's advice revolves primarily around the problem of positioning the object in the terminal device for a secure grasp. With few exceptions, the therapist should have little difficulty in seeing the relationship between the grasping surfaces of the fingers of the hand or hook and the contours of the object.

In addition to a secure grasp, however, it is essential for the object to be held by the terminal device in such a position that the amputee can proceed to use it. For example, it would be of little value to achieve a firm grasp on a fork if the tines pointed up rather than down which is the position of use. While this may seem an obvious point, it is essential that the therapist make the amputee aware of the fact that he can manually rotate (pronate and supinate) his terminal device.*

Note:

1. To grasp objects with the terminal device, the amputee will almost invariably pick up the object in his sound hand and place it in his artificial hand or hook. New amputees will have to be taught this; old amputees will perform in this manner routinely.
2. An important general principle is that in accomplishing bimanual activities, the prosthetic side acts as the holder or vise while the sound side is the active or working member. For example, most amputees prefer to use the fork in the prosthesis while the sound hand cuts with the knife.
3. In playing cards, the cards are gripped lightly in the terminal device and the sound hand arranges them. When several cards have been played (as for example in bridge) and the grasp loosens, the sound hand can simply push the fingers of the hand or hook closer together thus maintaining the proper grasp.
4. In handling matches with the APRL hand (as in lighting a cigarette) the amputee should be cautioned that the cosmetic glove, while not inflammable, will char and discolor if held in the flame.



Figure 6. Grasping Objects Directly from the Table.

The therapist's instruction and training in practical activities can serve to make the patient conscious of the uses to which his device can be put and to give him some of the tools of learning with which to further train himself. It is very important that the patient be encouraged at all times and that correction of errors in the use of the new devices be made in a helpful rather than in a critical manner. The relationship between the therapist and the amputee should always be on a friendly and cooperative basis.

In conclusion, it has been the authors' goal to present material that will be found useful by therapists in assisting amputees to adjust to APRL terminal devices. It has been our experience that the program described in this paper can adequately provide the average amputee with a foundation of basic skills necessary to use the APRL devices as functional tools in any situation.

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* Several types of prostheses for below-elbow amputees have made provision for active pronation-supination. The therapist should be cognizant of the availability of such devices.

THE MODERN DISEASE-BOREDOM*

E. V. COWDRY, Ph.D.

President of the Gerontological Society and of
the International Association of Gerontology,
Director of Wernse Laboratory for Cancer Research,
Washington University Medical School,
St. Louis.

This discussion is inspired by an article in the New Bedford Standard Times, July 16, 1952, by Hal Boyle entitled "Modern Disease." Occupational therapists—and all others who believe that activity has an important place in therapy—find it interesting to study this disease of boredom.

Boredom is described as a *modern* disease because it is particularly virulent among peoples that we call civilized. Unlike many other diseases of man it has no counterpart in lower animals which are all immune to its ravages. They never appear to suffer from having nothing to do. With increase in leisure time through use of labor saving devices and by reason of the 5-day week, boredom often becomes acute.

Not all of us are equally susceptible to boredom. Very susceptible are those who are idle, who think mostly of themselves and but little of others. Unconsciously they may follow the precept of an old Chinese sage: "Close the gateways of sense, content yourself with doing nothing and as long as you live you will have no trouble."

Resistance, on the other hand, comes with ambition to be up and doing things, with purpose and determination to make one's way in the world and in doing so to help others.

The symptoms are clear for all to see. Restlessness is typical. Any change from monotony is welcomed. Thus our Chinese cook once came in wreathed in smiles announcing that the coolie is very, very ill. My young daughter claims she needs to go to the pediatrician who, being a wise man, says she is simply bored. In times of peace and prosperity doctor's offices are crowded with people who are bored. The number falls off in time of war when we are expected to forget ourselves and save our country. To tell a person suffering from this disease that "you are too tense and need to relax" is not helpful. To say "yes, you are really ill" not infrequently results in disappearance of the symptoms of boredom. The patient is jolted out of them. Such radical treatment is of course unjustified. It may also have a bad effect on the rating of the physician because the patients may show no further signs of being really ill, in which event the physician's reputation for infallibility will suffer.

The means of escape from boredom may be mild in degree, such as the excitement of movies, trashy books and so forth. Time consuming games may

be helpful. Games of chance, leading to gambling, may relieve the monotony and loneliness of boredom, but they are obviously habit-forming and dangerous.

Some resort to mild sedatives which are not themselves harmful unless taken to excess and too often. These dull the feeling of boredom. I have in mind alcoholic drinks, over-indulgence in which can so easily become a curse. Tobacco smoking, especially of cigarettes, is on a similar basis. This mild but habit forming sedative if taken in large doses over many years may prove even more dangerous because of the evidence that cancer of the lung may result. As a matter of fact cancer of the lung is increasing in frequency more than cancer of any other part of the body. But I would rather become a drug addict, a disease that can generally be cured, than acquire an advanced and spreading cancer of the lungs. The ratio of males to females dying of lung cancer is about 4 to 1.

Solitary confinement is a pretty terrible thing with little to occupy one's mind except counting bricks in the wall, or some such time killer, and nobody to talk to. The victims of boredom can become desperate and their suffering can be greatly accentuated by other kinds of illness and by failure to adjust themselves to the give and take of life with other people. In 1952 suicides numbered between 16,000 and 17,000. The ratio of males to females dying by suicide is about 4 to 1.

The cure for boredom is some form of occupational therapy. For best results the occupation must be of some value to the community.

John Dewey has expressed what I like to call the "social Magna Charta" in the following words: "I am unable to see how the basic human problem can be solved without social changes which ensure first to every individual the continual chance to have intrinsically worthwhile experience, and secondly provide significant socially useful outlets for the maturity and wisdom gained in this experience."

Experience that is intrinsically worthwhile may be advantageous to the individual in many ways; but it is clear from this pronouncement that the individual must be granted socially useful outlets for action gained by this experience. In other

*Read at the spring meeting, Missouri OT Association, St. Louis, Mo., 1953.

words, opportunities must be afforded for the said individual to make his experience of some value to others in a fashion that is significant and appreciated by the community, be it large or small. John Dewey was at that time writing an introduction to my book, *Problems of Aging*. He clearly included in the basic human problem the welfare of people of all ages young, mature and aged.

It is our bounden duty to offer these opportunities to all but we cannot force old people, or any others, to avail themselves of them. Cooperation between physician and patient is admitted to be essential for all. It is even more important between physicians and social workers on the one hand and aged persons on the other. Unless the will to live and serve can be generated, or is already present as an asset of prime importance, there is very little that can be done for them.

Time-consuming hobbies do not appeal to me very much, for the reason that they do not provide any contribution to the community. But hobbies and entertainment are of consequence and should not be lightly dismissed. Games are beneficial for old and young. The socially useful outlets of wisdom and experience of older people should be dignified by some financial return, if only very little. Unless, of course, they are working in a voluntary capacity for church or some organization the primary purpose of which is service to the community.

Old people by the million must be cared for. The few wise ones have cultivated a constructive interest in the world about them both national and international. Time never hangs heavily on their hands. Boredom for them is seldom severe enough to be called a disease. They reach old age with an abundance of mental resources and they have probably shown wisdom also in husbanding their physical resources with the advice of wise physicians. But the vast majority approach the downswing of life wholly unprepared.

On the medical side we look for help to the emerging group of geriatricians. These are the opposite of the pediatricians. The pediatricians care for us from birth to maturity. Intelligent, prospective parents usually select a pediatrician before the infant is born and in the next 18 years or so the pediatrician becomes the guide, philosopher and friend of his patient. Geriatricians hope to give the same all-out kind of service to adults beginning in their prime and ending with their death. Like the pediatricians they should know the patient, his family, his environment and the adjustments he must make as he grows older. They should be good psychologists. Preventive medicine looms large for geriatricians as well as for pediatricians. They can prevent many of the ills of advancing years and mitigate others. The

time is fast approaching when geriatrics will be recognized as an important medical specialty and national boards will be set up to assess competence and grant certificates in this field as in pediatrics, surgery, ophthalmology and many others.

You, as occupational therapists, do not limit your service to the aging; but you treat increasing numbers of older people in cooperation with physicians. If John Dewey were alive he would be the first to realize that you are laboring at the front in helping people in body and mind not only to overcome the disease of boredom but, through wisely chosen activities, to live better lives. You likewise must be good psychologists. I think you are. You know that old people, having lived long lives, are far more individualistic than young ones. Each is a problem in him or herself. They cannot be treated wholesale like the young which make up a much more homogeneous group. They look to the future with apprehension, not with the zest to do great deeds. But aging is not all gloom. One has to find and emphasize the bright spots. "Add life to the years" as Professor George Piersol of the University of Pennsylvania used to say. It would be a sad mistake to underestimate the feeling of security and satisfaction that religion can give especially to your elderly patients.

I have been asked to refer to national and international developments as they affect older people. That a realization of the magnitude of the task before us is sweeping across the nation is evidenced by the meetings that are being held by large and small groups of farsighted people. These are so numerous and frequent that ordinary citizens cannot keep track of them. Mr. Clark Tibbitts, chairman of the committee on geriatrics of the Department of Health, Welfare and Education in Washington, knows most about them. The easiest way to keep up-to-date is to read the *Journal of Gerontology*, subscription to which costs \$10.00 per year. Payment can be directed to it at the Washington University School of Medicine, St. Louis 10. An economical way is for one person to take the *Journal* and to share it and the expense with others.

Gerontology is the large science which deals with aging from all aspects: psychological, sociological, economical, medical and biological. It includes geriatrics and occupational therapy as far as aging is concerned, as well as the problems of nursing homes which is a pressing problem just now.

Thoughtful people in other lands are likewise at work in this great field. We had an international congress on gerontology in St. Louis in 1951. Another will assemble in London, July 19-23, 1954. A feature of this congress will be visits to centers of geriatrics and occupational therapy

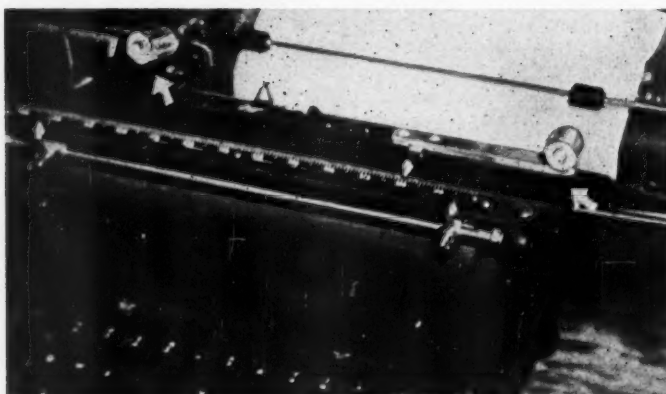
(Continued on page 117)

ADAPTED EQUIPMENT •

VIOLA W. SVENSSON, O.T.R.
MIRIAM C. BRENNAN, O.T.R.

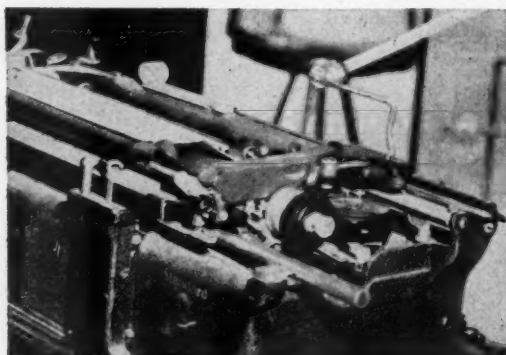
The following photographs and descriptions are of two additional adaptations found in the typing apparatus described in AJOT, Vol. VII, No. 6, November-December, page 256. Due to interest in these articles, a complete description and photographs of these adaptations for independent use in typing for the severely involved upper extremity patient have been added.

These two adaptations are simple to attach, and have proven excellent to use with a patient who is entirely unable to utilize his hands or arms. The only aid the patient would need is the insertion and removal of the paper. This adaptation has been utilized for many months by patients so that it has served its purpose. There is no doubt that perhaps a more simplified method can be achieved with more research.



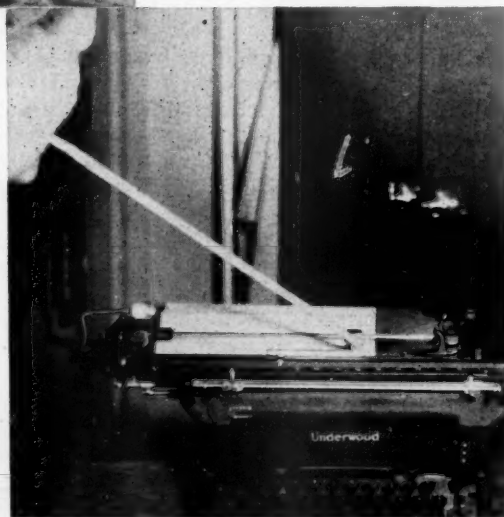
The front view of the typewriter with the paper inserted. Arrows point to the two attachments which have been added.

This photograph shows the use of the stick in the mouth when the end is inserted into the cylinder attached to the pointer. By pushing to the right, this device acts as a carriage return. With this adaptation, the patient is able to move the carriage by herself without requiring help. This process creates the most independent activity on the typewriter possible when the upper extremities are completely flail. →



A rear view featuring the line spacer adaptation with a stick inserted into the cylinder.

A flat piece of aluminum, indicated by the arrow on the right) has been attached to the carriage frame pointer with a solid piece of aluminum sufficiently drilled out in the center for the ← secure insertion of the end of a stick. A similar piece of drilled-out aluminum (indicated by the arrow on the left) has been attached to the line spacer in place of the lever handle on a normal typewriter.



The front view of the typewriter with a stick being used in the carriage frame pointer.

← With a stick in the mouth, the patient inserts the end into the cylinder and pushes against the cylinder, thus spacing the lines as desired. The attachment of this adaptation is done at the movement part of the usual hand lever on a regular typewriter.

*The eighth of a series of illustrations of apparatus aids toward independent activities as designed and constructed in the occupational therapy department of the New York State Rehabilitation Hospital, West Haverstraw, New York.

AJOT VIII, 3, 1954

THE USE OF SELF-CURING ACRYLIC IN THE MAKING OF A MOUTHPIECE

To Aid the Upper Extremity Paralytic Patient

MARVIN SNIDERMAN,* D.D.S.

Pittsburgh, Pennsylvania

and

LUCY IRENE HOLLIS, O.T.R.

Assistant Chief of Occupational Therapy

Georgia Warm Springs Foundation

Warm Springs, Georgia

INTRODUCTION

It is frequently necessary for the severely involved paralytic patient to utilize head movements in accomplishing many of the activities that are related to his daily needs. By holding a stick in his mouth he can write, turn pages, dial a telephone and do many things that he is no longer able to do with his hands. There are several types of mouthpieces in use today to aid such a patient. A satisfactory one should incorporate the following characteristics:

1. Allow the condyles of the mandible to rest in a near normal position.
2. Place little or no strain on the muscles of mastication.
3. Eliminate lateral motion of the stick by wide area of contact with upper and lower teeth.
4. Not objectionable in color, odor, or taste.
5. Sanitary.
6. Inexpensive.
7. Easily fabricated.
8. Adaptable for various uses such as holding a pencil for writing, a typing stick for the typewriter, paint brushes, page turner or a stick to use in dialing the telephone.
9. Easily repaired.

A very simply made type of adaptor which fulfills all of the above requirements has been developed and is in use at the Georgia Warm Springs Foundation (see Figure 1). It is made from self-curing acrylic, the type used in dentistry to repair dentures, which is readily available from any dental supply dealer.

The combination of a "polymer" and a "monomer" result in a self-curing acrylic which automatically polymerizes without the aid of any expensive equipment. Polymerization is the chemical union of two or more molecules of a substance to form a new compound without the elimination of a secondary compound. This self-curing acrylic costs approximately nine dollars per pound. It is estimated that seventy-five mouthpieces can be made from each pound so the cost is negligible.

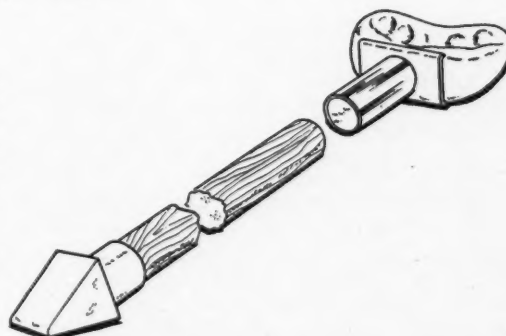


Figure 1. Final product with wooden dowel and rubber eraser tip ready for use.

MATERIALS AND METHODS:

1. Lucite, which is ordinary acrylic plastic, 1/32" of an inch in thickness.
2. Self-curing acrylic powder which is called "polymer" which can be obtained in clear, mottled or pink color.
3. Self-curing acrylic liquid which is called "monomer."
4. A small rounded-bottom mixing jar, with a lid.
5. Medicine dropper.
6. Vulcanite burs, and fissure burs, to be used in a small grinding tool or lathe.
7. A "T" connection made of metal. (Figure 1).
8. Tin foil.
9. Rag polishing wheel with pumice.

TECHNIQUES BY STEPS

1. A piece of 1/32" lucite approximately two inches square is heated until soft and placed in the patient's mouth. The patient is instructed to bite into the plastic with a normal bite in order to secure a shallow indentation of the teeth.

2. One-fourth teaspoon of the polymer powder is placed in a small rounded-bottom mixing jar. Sufficient monomer is placed on the powder through a medicine dropper to thoroughly moisten the powder. Cover the jar with the cap. Recap the bottle of monomer quickly since it is quite volatile. Allow the mixture to stand covered for

*While author's wife was under treatment at Georgia Warm Springs Foundation, he and Miss Hollis worked on this project.

about two or three minutes or until a dull gloss is seen. This acrylic should then be placed in the palm of the hand and made into a roll with the fingers. The roll should be one and three-fourths to two inches long and about one-fourth inch in diameter. Work rapidly at this point. Moisten the piece of lucite along the line made



Figure 2. Impression of upper teeth on lucite—top view.

by the indentation of the upper teeth with one or two drops of monomer. Quickly place the roll of acrylic along this line and press firmly. Next place this in the patient's mouth and instruct the patient to bite into the acrylic roll. Allow to remain in the mouth for one minute if the patient has no great respiratory difficulties. If he objects to the odor or the flavor the acrylic may be removed from the mouth immediately after the impression has been made. In any case, remove the acrylic from the mouth in two minutes because



Figure 3. Impression of upper and lower teeth—front view.

a great deal of heat is generated during the curing process and this may be of discomfort to the patient. Allow this first impression to stand for at least ten minutes or until it is hard (see Figure 2). The patient may be dismissed and the third step may be done later.

3. The above process is repeated for the lower teeth. Have the patient fit the upper teeth in the impression that has hardened and bite into the newly formed roll of acrylic with the lower teeth, maintaining a normal position of the mandible (see Figure 3). If the patient tends to push the lower jaw forward, have him yawn and then bite. This will bring the condyles of the mandible in a normal position.

4. At this point, the patient may be dismissed and a "T" connection made of metal is attached to the lucite reinforced upper and lower bite (see Figure 4). In preparation for this the excess lucite should be removed using a vulcanite or fissure bur, leaving one-eighth inch projection at

the center front to fit into the metal adaptor. Affix the "T" connection to the mouth piece bite in the relationship desired. It can be placed at any angle convenient to the patient's use, however it is recommended that a horizontal relationship be used. Pat the acrylic carefully around the "T" connection so the "T" will be securely attached. Be careful that none of the excess acrylic gets into the impression of either the upper or the lower teeth. Tin foil is used to protect the impression area during the addition of the "T" connection. The case should now be allowed to cure for at least twenty minutes. The excess may then be removed with vulcanite or fissure burs, sandpaper or stones and finally polished with wet pumice on a wet rag wheel before delivery to the patient. The case is

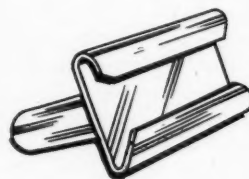


Figure 4. "T" connection made of metal.

now ready for the patient to use with the type of adaptor desired. A simple wooden dowel with rubber eraser can serve as a page turner, typing stick, telephone dial aid or as a means of playing cards from a card rack (see Figure 1). A further use of this appliance might be the addition of a pencil or a paint brush attached by means of a metal clip.

Should the case break, it is easily repaired. Small dovetails can be drilled in the thicker portions using a fissure bur, and a new mix of acrylic filled into these dovetails. Each surface should be moistened with the monomer before the two pieces are approximated. Excess may be removed and the case repolished.

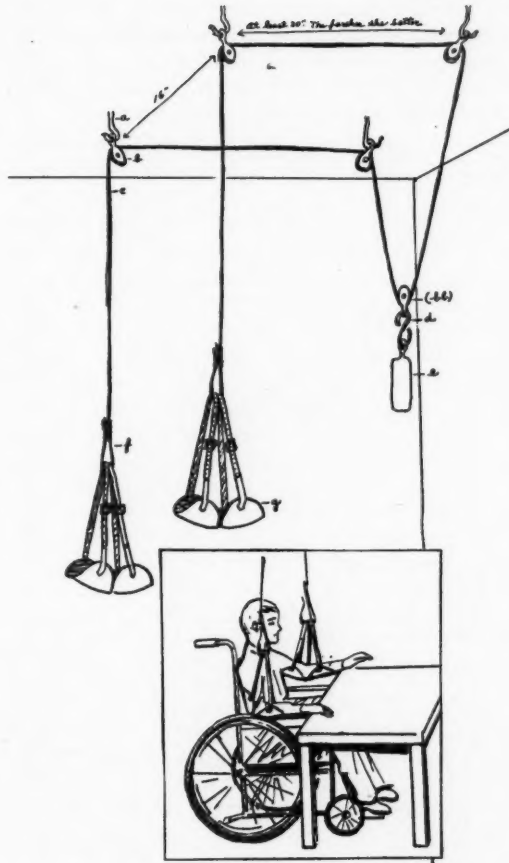
SUMMARY

1. A simple economical method is presented for construction of an acrylic lucite mouthpiece for use by the upper extremity paralytic patient.
2. Use of self-curing acrylic is advantageous in that one may easily modify to the individual needs of the patient. The material is easily added to and is esthetically pleasing to the patient.

Reprints of *Administrative Practices and Personnel Policies*, page 128, are available from AOTA, 33 West 42nd Street, New York 36, N.Y.

ARM SLING*

LENORE SECORD, O.T.R.



This arm sling support with gravity eliminated has been devised for the occupational therapy shop with very limited space (and fairly low ceilings).

MATERIALS NEEDED:

- Four 3" screw hooks.
- Five pulleys (awning pulleys to fit 3/16" cord.)
- Twenty-five cent type may be used but if possible, use ball bearing pulleys which are expensive. If not, get one ball bearing pulley to attach to S hook and weight.
- Seventeen feet of Venetian blind cord, 3/16".
- One S hook.
- Weight to attach to S hook. This will vary from 2-1/2 lbs. up depending on individual's weight.
- Loop for arm slings to go through. (Tie end securely).
- Two pairs arm slings with adjustable strap length.

PURPOSE

This type of arm sling was devised to save space in the occupational therapy shop that has no room for an upright stand arm support. The apparatus

is attached to the ceiling by four screw hooks that are screwed permanently in the ceiling. When not in use, the weight can be removed and the rope raised out of the way. Or the pulleys may be removed from the hooks and everything stored in a drawer. If several sets of hooks are in the room, the apparatus can be moved where desired in a minute.

DIRECTIONS

- (1) Screw four hooks in ceiling, open end facing out as illustrated. Front hooks are arms' width apart (about 16"). Back hooks should be at least 20 inches back, farther if possible. This would eliminate possibility of weight swinging forward.
- (2) String rope over pulleys as illustrated.
- (3) Make loops.
- (4) Slip on S hook and weight. Experiment with proper weight which may vary from 2 1/2 to 5 lbs.
- (5) Put arm slings under patient's upper and forearm. Adjust strap length.

PRINCIPLE

Each arm stays in the position it is put, or can be voluntary raised or lowered. Each arm works independently. If the right arm is raised, the left arm stays at the same level. It does *not* lower when the right arm is raised.

*Designed by Ronald Johnson, carpenter at Swedish Hospital, Seattle, Washington.

Boredom . . .

(Continued from page 113)

in London and elsewhere in Britain. It is expected that many nations will be represented. State associations of occupational therapy should send delegates from this country together with delegates from medical, sociological, psychological, anthropological and numerous other associations. We have a committee, headed by Dr. Wm. B. Kountz, 5600 Arsenal Street, St. Louis, which is in charge of arrangements for American participation. It will be a great meeting of minds. I hope to see your delegates there.

In the classified listing of suppliers of special equipment appearing in the Part II section of the April issue, Theraplast Company should have been listed in bold face as one of our regular and loyal advertisers.

NATIONALLY SPEAKING

From the President

The most important person in this organization is the operating therapist—the occupational therapist on the job. Without him there would be no occupational therapy. Under prescription it is he who serves the patient; by his performance we are known.

Heretofore, AOTA services to the practicing therapist came about through committees on education, special studies, legislation, registration, etc. They have felt the value of these committee programs indirectly but have a need for something more pertinent to their daily procedures.

At the last annual meeting the Board of Management created a new standing committee, known as the committee on clinical procedures. The purpose of this committee is to assist all practicing occupational therapists by providing a vehicle through which they can correlate their clinical programs and express their needs. They must define the scope of occupational therapy in each of the specialized areas and better coordinate the presentation of the field to those with whom we work. Because occupational therapy appears to be an informal and permissive procedure, it is important that the underlying principles and therapeutic structure of the work be well defined and well presented. Some recent questions that have come to us indicate a need for more informative answers in each of the clinical areas.

As we define more clearly these specialized areas we must be sure that we have adequately interpreted the clinical demands and responsibilities that medicine has given to occupational therapy in clinical service. To direct our thinking the Board also reorganized our source of medical advice into a formal medical advisory committee. We have requested that each of the medical boards and specialty groups, which we have clinically served in the past, appoint a representative physician who will serve on our medical advisory committee, who will meet with us and assist our development in his area of medicine. The response to our request has been most gratifying. Such medical advice should be of marked value in crystallizing the scope of occupational therapy in each of the five areas designated for us by the AMA in the *Essentials* established for the training of our personnel.

The value of occupational therapy is primarily the same in all fields. Under medical prescription the patient is himself put into performance to stimulate physiological function, motor development and integration of cerebration and emotional reactions. The emphasis and direction vary in

the specialized areas but the importance of integrating the function of the individual as a total being is the basis for treatment and the focus throughout occupational therapy. It is this concept that the physician embodies in his prescription with specific direction for the special needs of each patient.

Because of this common ground throughout all our work, the difference in the clinical areas is only a matter of variations on a common theme. For this reason the committee on clinical procedures is organized as a unit with five sections representing psychiatric, tuberculous, pediatric, kinetic and general medical specialties. The chairmen of each of the sub-groups, with the chairman of the committee, constitute the steering committee which will coordinate the functions of each of the area groups. Each sub-chairman will appoint his own committee members and conduct his own group meetings and interim studies. He will submit his own group problems and requests to the steering committee and serve to coordinate the functions of the committee as a whole. In this way each sub-group will have its own voice and opportunity for specialized work at a standing committee level within the AOTA. It is hoped that this organization will effectively meet an expressed need and serve to strengthen our professional organization.

Captain Wilma West has agreed to serve as chairman of the committee on clinical procedures. Her breadth of interest in the national office and Army Field Service programs should qualify her well for this important job. As chairman, she appoints the sub-chairmen for the specialized groups constituting the new committee.

Two already-organized groups, with the consent of their chairmen, will serve intact as the nucleus for representation of the specialized areas. The temporarily appointed psychiatric committee, which was organized under Betty Ridgway, is now given standing committee status as the psychiatric section of the committee on clinical procedure. The new sub-chairman will be appointed from within the former central portion of that group to maintain its continuity. The former sub-committee on general medicine, chaired by Angeline Howard, will be moved from the special studies committee to the new clinical procedures committee with the consent of the chairman and sub-chairman respectively, so that its studies may continue and serve a broader purpose.

Part of the committee convened in Indianapolis in conjunction with the AOTA's mid-year meetings, March 26-28, and formulated some tentative objectives. These are still subject to final approval by the full committee, but they will suggest the aims and purposes of this newly-established group.

They are as follows:

1. To provide a medium of expression for the practicing occupational therapist through the formation of sub-groups representing the five major medical areas pertinent to the profession, viz: psychiatry, physical disabilities, tuberculosis, pediatrics, and general medicine/surgery; and to produce source materials of use to these therapists.
2. To determine and delimit the scope of each of the five major diagnostic areas of occupational therapy.
3. To define the treatment objectives and functions of occupational therapy in each of these diagnostic areas for the purpose of raising standards of treatment.
4. To refer to the education committee new or developing precepts pertinent to the education of the occupational therapist.
5. To study, select and assign projects for development by the subcommittees, and to establish standards for and methods of executing such projects.
6. To evaluate and act upon progress reports, studies and recommendations of the subcommittees.
7. To correlate all studies and projects of the committee with related standing and special committees of the AOTA and with national organization personnel.
8. To report periodically to the membership, through AJOT and the Newsletter, and semi-annually to the Board of Management of the national association.

It is with our intense interest and good wishes that this new committee assumes its important responsibility. I urge everyone to respond realistically from the grassroots level to support its work. Its effectiveness will depend on the contribution of every occupational therapist in the field.

Henrietta McNary, O.T.R.
President.

*Mid-year Report of the Executive Director**

This report will cover activities of the national office and the Association since the 1953 annual conference in Houston. The interval represented by the report is only a four-month period due to the late date of the annual meeting. Our activities, in addition to the usual constant services rendered, have been largely follow-through on business stemming out of the conference.

Membership. As of March 1, 1954, there were 4,073 registered therapists and 3,433 members. This represents an increase of 436 registered over last year, but no increase in membership. The

discrepancy between total registration and membership numbers has gradually increased each year:

1951	1952	1953	1954
93	137	375	640

Two hundred sixty-seven or 11% of all registrants who are actively practicing are not members. It is within this group that some of the difference should be resolved. The possibility of combined registration and membership fees for active practicing therapists should be considered in an effort to alleviate the situation.

Financial statements. By instruction, financial statements for general, educational and reserve funds accompanied by a letter from the treasurer, were forwarded to the Board members showing expenditures for the fiscal year ending August, 1953; expenditures to date, January 31, 1954, and the approved budget for the year ending August, 1954. The February financial statement will be available at the Board meeting, as well as the complete financial statement of the National Foundation for Infantile Paralysis Fund for recruitment which terminated March 1st.

The auditor has requested that the minutes record the Board vote approving transfer of monies from the general fund to the educational fund. The board is asked to cast this vote for the \$6,000 so indicated in the current budget.

National Office.

1. **Personnel.** A brief resume will be included here for information of Board members because our situation is unique. A completely new secretarial and clerical staff, in the general and education office, has assumed duty since fall. This has meant a conscientious effort to orient the staff without loss of continuity and efficiency of service. We have been fortunate in securing capable staff members whose performance is to be commended as they joined us during the busiest time of the year—billing and payment of dues and publication of Yearbook. We have employed additional secretarial help since fall provided for in the NFIP grant to assist in handling the increased correspondence and mailing resulting from the recruitment program. The position of assistant to the executive director, made vacant by Miss Heermans' appointment to the education office, was publicized in the March Newsletter.

2. **Office procedures survey.** Following Board approval, professional advice on the reorganization of office procedures in billing, bookkeeping methods related to it, membership and registration card and record file systems was secured. Mr. Carr, AOTA auditor, has proceeded to conduct a study for us. The business services department of Remington Rand, Inc., sent in their records consultant

*Read at the mid-year meeting of the Board of Management of the American Occupational Therapy Association, Indianapolis, Indiana, March 28, 1954.

to appraise our system. Each of these reports indicate that duplication and excessive record keeping can be eliminated.

3. **Personnel policies.** Following Board approval, requested by the treasurer, recommended salary ranges, adjustments and perquisites in the national office have been undergoing study. Considerable materials have been gathered to aid the committee. These materials include personnel practices and salary ranges for secretarial and professional staff in the national headquarters of approximately 30 related organizations in the health field. It is felt that our Association is at a place in professional growth where considered thought should be given to our present and long-range national office policies in terms of economic trends and common practice in similar organizations. The report from the committee will be presented at the mid-year meeting.

1954 Yearbook. It is anticipated that the Yearbook will be off the press the first week in April. Advertising shows an increase of 2½ pages over last year (30 pp vs. 27½ pp), representing one more advertiser (50 vs. 49).

We carried out the package deal plan with AJOT this year and did no direct soliciting for Yearbook ads until January instead of October. A breakdown of advertising shows that 24 of the total 50 advertisers were in the package deal. These were principally ¼ and ⅛ page ads. Yearbook rates should be further adjusted to synchronize with AJOT rates particularly in relation to 8-time insertions.

Following Board approval, the geographical listing will appear with name and address of the institution only, and without personal names of therapists. Rather than listing by state and institution as previously done, the listing will appear by state and city which avoids duplication and follows the usual procedure of geographical listings.

Recruitment. A full report of activities of the committee on recruitment and publicity and the national office is to be found in the two semi-annual reports to the NFIP. A final report is being prepared which will include the last projects in the NFIP program now being completed—traveling exhibit, colored film strip, manual for recruitment chairmen. Much credit is due Mr. John Redjinski, state chairmen and the schools for their creative and hard work in carrying out the special recruitment program this year.

Forty-two thousand, four hundred fifty pieces of recruitment literature were sent in bulk mailing to the states for local distribution. The increase in volume of general inquiries for career information now require practically the full time of our mailing clerk.

Plans for the 1954 implementation of the

recruitment and publicity program are under consideration. If we are to adequately continue the work begun, it will be necessary to add more staff personnel to coordinate and handle it.

National Institutes of Health. Contact has been re-established relative to possible grants in the future. Conferences have been held with the director of the National Institute of Neurological Disease (rehabilitation traineeships); Division of Research Grants; chief of Professional Services Branch; Training and Standards Branch of National Institute of Mental Health.

World Federation of Occupational Therapists. The national office has worked closely with Miss Spackman, U. S. delegate, and the congress committee for the first World Federation meeting. Two mailings have gone to the 61 U. S. members: (1) preliminary announcement, (2) program bulletin. General information has been supplied for members and numerous inquirers. Twenty-four American therapists have already registered for attendance at the congress with indications that there will be a number more.

We wish to acknowledge the gift of \$25.00 from the Wisconsin OT Association toward financing the congress. The Astley Ainsley Hospital has contributed 300 pounds.

We are also working closely with the New York office of the International Society for the Welfare of Cripples relative to the sixth world congress to be held in The Hague September 13-17, 1954.

Medical Advisory Council. Following Board action, a medical council is being set up with a representative appointed from each of the specialist groups within the AMA framework. Replies to our invitation have resulted in the following:

American Academy of Orthopedic Surgeons, Dr. H. R. McCarroll, St. Louis.

American Academy of Pediatrics, Dr. Ralph E. Moloshek, New York.

American College of Physicians, Board of Regents will act in April.

American College of Chest Physicians, Dr. Leonard E. Evander, Lockport, N. Y.

American College of Surgeons, Board of Regents will act in May.

American Congress of Physical Medicine and Rehabilitation, names submitted for choice.

The Board is asked to give consideration to plans for the first meeting of the council which should be in the near future.

Status with U. S. Treasury. We have submitted an application to the office of the Commissioner of Internal Revenue requesting reclassification of our exempt status from section 101(7) of the Internal Revenue Code to section 101(6). This will enable us to receive deductible contributions from foundations (gifts of a tax free nature) and

will automatically list us in the U. S. Treasury Cumulative Index of Exempt Organizations. We were apparently improperly classified in 1938 and had not had occasion to check it until called to our attention by the Fleischman Foundation. Mr. Carr, auditor, and Miss Fish went to Washington to discuss the situation with the Chief, Exempt Organizations Branch. We are encouraged to believe that the reclassification can be accomplished in the near future.

American Hospital Association Institute. The first jointly sponsored institute (AHA-AOTA) will be held in Chicago, May 6-8. Miss Matthews and Miss Fish attended the Chicago meeting of the joint planning committee in December. Printed announcements were mailed to all AOTA members. It is hoped that this first endeavor is successful as it has the potential of becoming an important educational measure offered annually.

National Health Council. Notification has been received that we have been voted into active membership following our application one year ago. There is no membership fee but each member agency is expected to make a contribution (minimal \$50.00). Action should be taken on this. Each member agency is entitled to 1 representative on the board of directors and 3 delegates. The Board is asked to name these representatives.

Public Relations. The listing below represents some of the contacts of the national office staff during the period covered in this report.

Meetings attended:

American Medical Association—council on medical education and licensure, Chicago.

American Public Health Association—annual meeting, New York.

Columbia University School of OT—guest speaker at graduation, New York.

Conference on Care of Long-Term Patient—represented by Mrs. Elizabeth Jameson, Chicago. Eastern OT Associations—regional conferences planning committee, New York.

Governors Committee on Mental Health—represented by Barbara Jewett, Detroit.

National Foundation for Infantile Paralysis—guest speaker at women's activities meeting, New York.

National Health Council—executives monthly meetings and annual meeting, New York.

Teachers College, Columbia University—alumni conference, New York.

United Hospital Fund—institute for OT & PT, guest speaker, New York.

University of Illinois, School of OT—guest speaker, Chicago.

Veterans Administration—OT consultants meeting, Washington, D. C.

WEVD Radio Station—broadcast, New York.

Visits:

American Association of Medical Social Workers, Washington, D. C.

U. S. Navy Medical Center, Bethesda, Maryland.

International Society for Welfare of Cripples, New York.

National Society for Crippled Children & Adults, Chicago.

Dept. of Health, Education and Welfare, Hospital Division, Washington, D. C.

Sincere appreciation is expressed to the executive committee, Board of Management, committee chairmen and members for their cooperation and support.

Respectfully submitted,

Marjorie Fish, O.T.R.
Executive Director.

Ontogenetic Principles . . .

(Continued from page 99)

cases on ontogenetic development. The utilization of this principle in physical medicine does not preclude the use of other neurological principles. On the other hand, several principles can be utilized advantageously at one time. This paper has attempted to suggest the general plan of treatment as it would follow the initial development of upper extremity motor skills in the normal child.

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FEATURED O.T. DEPARTMENTS

OCCUPATIONAL THERAPY DEPARTMENT MASSACHUSETTS GENERAL HOSPITAL

Boston, Massachusetts

Irma A. Cohen, O.T.R., *Director*

In my opinion the Massachusetts General Hospital today has an outstanding occupational therapy department. It was only through the help and guidance of Doctor Arthur L. Watkins, chief of physical medicine, and the cooperation of the hospital administration that this was made possible.

After becoming director, I decided that much needed to be done for the benefit of the hospital and for the profession of occupational therapy. Besides having a ward program the occupational therapy department is physically divided into three separate units; the main clinic for ambulatory patients, the neuropsychiatric clinic and the pediatric clinic.

The problems that faced us were: lack of understanding of occupational therapy among the professional services, poor physical facilities, lack of planned coordination within the department, insufficient organization of student and volunteer programs, insufficient staff for a 900 bed institution and salary readjustments. These problems were thoroughly discussed with the chief of physical medicine and the following program was evolved.

In attacking our first problem of teaching the scope of occupational therapy, a clarification of prescriptions was necessary. Diversional therapy was curtailed to a minimum because this was the apparent understanding of the total function of occupational therapy. The term "diversional" was changed to "apotropic" which is derived from the Greek. By change of word usage it was felt that occupational therapy would be prescribed less indiscriminately. Functional treatment was further explained; kinetic: activity to increase range of motion and skill; energetic: goal is to increase strength; metric: measure some function; prevocational analysis and activities of daily living; psychiatric and pediatric: to adjust patients to hospitalization and aid to alleviate emotional problems. All referrals for the main clinic and ward service were to be analyzed more carefully by the physiatrists of our staff.

In so far as the occupational therapists were concerned they were to attend all social service conferences attended by doctors on the services, visiting physicians, social workers and the head nurse. It was here that staff therapists and the director had the opportunity to discuss patient problems to enlighten these personnel how best to refer patients and to employ the field of occupational



Scene From Woodworking Area

Note arrangement can accommodate eight patients including wheelchair patients.

therapy. Also throughout the hospital the director of occupational therapy met and discussed treatment with all department heads, including maintenance groups, so that everyone would not only know him but the department he represented.

Re-planning of clinical facilities was undertaken in the main and pediatric units with the understanding that the main clinic be reorganized as the center of activity and the pediatric unit enlarged as it was wholly inadequate to handle the patient load.

The main clinic was unappealing to patients and doctors. The space was poorly utilized, new equipment was needed and the fee schedule needed readjusting for the patients were paying for materials instead of treatment fees.

The ladies' visiting committee of this hospital was brought into a more active role, and to these women many thanks are given for their moral support and generous donations. The clinic was redecorated in an appealing color and new drapes were added.

In this center a breakdown of work area was desired. This included a complete kitchen and domestic unit for activities of daily living, a prevocational and small activity combination unit, a woodworking area to allow patients independence in doing their work with minimum effort and the remaining area was utilized for ceramics, weaving and printing. The hospital architect was called in for consultation in re-designing this whole area. Through the generosity of the telephone company a PBX board was obtained, and through other sources an electric typewriter was supplied. The ladies' visiting committee provided a complete ceramic unit including a kiln, potters wheel and supplies.

In the pediatric unit we were faced with different problems. This section consists of three wards with the age range of patients varying from 4 to 16 years. Because of the difference in ages the activities are numerous. Lack of work and storage areas was most pressing. In this program it became necessary to consult and to plan with the nursing service in order to avoid jeopardizing the nursing space requirements. Here again, by free open consultation and understanding among the people concerned, final plans were drawn to include space for bed and ambulatory cases. We established a woodworking section for the older



Activities of Daily Living Area

Conventional kitchen equipment conveniently arranged primarily used for departmental storage.

boys and set aside counter space for a messy area for small children. The wall space was used for storage. Thus the main and pediatric clinics were brought to the desired professional standard within a period of one year.

For better coordination of the staff, weekly staff conferences and staff rounds were inaugurated for the discussion of individual problems and case reports so that all services were unified. In order to carry out this program successfully, and to handle our regular case load, it was necessary to increase our staff.

The student program is vital to this department as Massachusetts General is one of the outstanding teaching hospitals in the country. It was felt that this particular program is a direct reflection of public relations in occupational therapy. The previous student program was curtailed until a suitable survey could be made regarding the best methods of arranging a teaching program. In the program we have established, the students will receive lectures from various departments of the hospital, attend rounds and conferences. They will rotate within the units of this department. In July of this year we will increase the scope of our student training to two programs: general medicine

AJOT VIII, 3, 1954



Prevocational and Small Activity Area

Note the freedom of this area allowing space for the necessary test equipment.

and surgery and pediatric affiliations.

The volunteer program at the outset was restricted to the pediatric section. This had to be changed to include all phases of the occupational therapy department. Conferences with the volunteer department resulted in our having complete supervision of our volunteers and a proper orientation program was initiated for volunteers as aids in the department. This program is successful, not only to our department, but it has increased the morale and interest of the volunteers themselves.

In the space of the year these problems were overcome. Our staff, at the hospital, now includes the director plus four staff therapists, and a corps of fifteen volunteers. Salary readjustments were met according to professional demands.

Now the morale of the staff of the physical medicine department has greatly improved. After holding our open house for the entire hospital personnel to meet our staff and to become acquainted with our department, no one, any longer, at the Massachusetts General Hospital asks where and what is occupational therapy because it has reached unprecedented levels in working for full usefulness in a general hospital.

AOTA ANNUAL CONFERENCE

Washington, D.C.

October 16-23, 1954

PLAN TO ATTEND

CONFERENCE PLACES, PLANS AND PEOPLE

OT Departments

See more in '54. Yes, the 1954 AOTA annual conference in Washington, D. C., October 16-22, will be one of those rare opportunities when you can visit one of the world's most beautiful and sight-seeable cities, attend the most important professional meeting of the year, and look in on several of the many OT departments that dot the area. Whatever your OT specialty there is an institution within hailing distance of the Nation's Capital that you'll find professionally profitable as a conference side-trip next October.

* * *

St. Elizabeth's Hospital, for example, is the psychiatric center for the District of Columbia. The OT department has pioneered in the establishment of a program for criminally insane patients that includes individual treatment, group athletics and the publishing of a monthly journal. The staff of twelve registered therapists and seven aides carries on a program that reaches over one-third of the 7,300 patients through nine well-equipped shops in or near buildings which they serve as well as work on wards. Therapists attend clinical and diagnostic conferences at which individual cases are discussed and analyzed from the point of view of psychodynamics, treatment and prognosis. OT is thus integrated into the total approach to patient recovery.

* * *

Glenn Dale Hospital will be of special interest to those specializing in TB treatment. Five registered therapists and one unregistered therapist serve the 650 bed hospital and carry out treatment in three OT shops and on wards. The department coordinates the work of four teachers, carries out manual and creative projects, plans recreational activities, schedules religious services and plans therapeutic exercises for post-surgical patients. The department also has a pre-vocational program in office practices that includes typing, shorthand, filing, bookkeeping and the use of office machines.

* * *

The Occupational Therapy Workshop is jointly sponsored and equipped by the Davis Memorial Goodwill Industries and the Washington Heart Association. Each organization has its own therapist and the work day is divided between the two groups. Most treatment is pre-vocational in nature with the 35 patients working at crafts that are selected to show dexterity and build work tolerance.

* * *

A hospital on the "must" list of places to see during the annual conference is the world-famous Walter Reed Hospital—the Army's Medical Center. The 2,000-bed hospital has an OT staff that includes the director, twelve therapists, six enlisted technicians and a recreational worker. The Army Prosthetics Research Laboratory at Walter Reed is pioneering in the development of new and improved artificial hands, arms, feet and legs thus giving the OT staff an opportunity to work with patients fitted with the latest in prosthetic devices. The department also works closely with patients from the hospital's Audiology and Speech Correction Center. Nine OT affiliates at a time receive their clinical training at Walter Reed.

* * *

It's only a short and very pleasant drive through the rolling Maryland countryside to Reisterstown, for a visit to the Children's Rehabilitation Institute (formerly at Cockeysville). CRI is a voluntary, non-profit boarding school dedicated to the treatment and education of cerebral palsied children. Financed entirely through the tuition paid by students and a nominal fee paid by graduate trainees, this institution is proving that progressive methods and staff ingenuity can flourish on a shoe-string budget. All of the 65 to 70 patients are given OT.

* * *

Still another department within reach of conference delegates is at the Woodrow Wilson Rehabilitation Center at Fishersville, Virginia. The center provides guidance and vocational training for the severely disabled. Three registered therapists (current plans call for a fourth) work with 315 patients representing a wide variety of disabilities. OT is closely coordinated with the vocational objectives of each patient, which means close cooperation with the department of physical therapy, guidance department, vocational instructors, housemothers and fathers and maintenance.

* * *

These brief sketches of OT departments that will interest delegates to the 1954 AOTA annual conference on October 16-22 are intended to whet your appetite. Hospitals selected for discussion are simply representative samples of the wide variety of OT work done in the Washington-Maryland-Virginia area. For the complete picture of OT activities at these and the many other hospitals within easy reach of Washington, plan now to attend the conference and . . . see more in '54.

Program Plans

In order to give you the kind of program which you have been asking for, the 1954 conference program committee approached the subject by planning general topics which could be treated in such a way as to relate to the five fields of occupational therapy. The following six topics have been used as guides in developing the specific topics for the program: (1) medical research, (2) industrial medicine, (3) mental health, (4) administration, (5) educational methods and techniques, (6) contributing therapies. Each of these topics will be brought to you in general sessions by outstanding and dynamic speakers, well known for their ability. The conference theme "Capitalize Your Assets" will most certainly be highlighted.

Sectional meetings will follow the general sessions in which subjects will receive more specific treatment. These will be further implemented by "workshops" which will truly be workshops with audience participation. Space for meeting rooms will limit the numbers who may attend the workshops so early reservations should be made.

The annual business meeting will be held Tuesday evening, October 19. This is a change from the usual procedure and we hope every member will be present at this important meeting.

Wednesday morning following the keynote speaker you will be brought up-to-date on medical research as sponsored and conducted by some of the outstanding national organizations such as the National Foundation for Infantile Paralysis, The American Heart Association, The United Cerebral Palsy Association, The National Tuberculosis Association.

The banquet will be held Thursday evening with an outstanding speaker of national importance, followed by entertainment which you could receive only in the nation's capital. This is one national conference which no occupational therapist can really "afford not to attend."

OT Personalities



Mary Beach, O.T.R.

Mary B. Beach, O.T.R., local general chairman of the 1954 AOTA conference in Washington, D. C., studied the history of art at the University of Minnesota and planned to work in an art museum. An interim job, however, brought her in contact with occupational therapists and side-tracked the museum for OT training at the Bos-

ton School of Occupational Therapy. She is now an occupational therapy specialist at the central office of the Veterans Administration in Washington, D. C., and a past president of the District of Columbia OT Association. Spare moments are filled with knitting, sewing, reading and painting.



Arvilla Merrill, O.T.R.

Mrs. Arvilla D. Merrill, O.T.R., co-chairman of the 1954 AOTA conference in Washington, D. C., has been on the planning committee of national conventions before—she was chairman of the 1941 conference in Washington. She is chief occupational therapist at Saint Elizabeth's Hospital, Washington, D. C., and is also a past president of the District of Columbia OT Association. She has served as secretary of the House of Delegates, chairman of the clinical training committee when it was organized, and was recently appointed to the sub-committee on clinical practices. She is a graduate of the Boston School of Occupational Therapy and has specialized in the psychiatric field throughout her professional career. Her interests include bowling, a collection of antique glass and a thriving crop of African violets.



H. Elizabeth Messick, O.T.R.

H. Elizabeth Messick, O.T.R., program chairman, is director of the School of Occupational Therapy of Richmond Professional Institute of the College of William and Mary. She is a graduate of the occupational therapy course at Maryland Institute and Sheppard Pratt Hospital, and Post Graduate course at Walter Reed Hospital. Her experience has been varied, both Army and civilian, including the organization and development of the occupational therapy department, Crippled Children's Clinic, Washington, D. C. In 1947, she received the Meritorious Civilian Service Emblem and Citation for her excellent work as assistant chief and then chief of the occupational therapy branch, Office of the Surgeon General, U. S. Army. After seventeen years—virtually a native of Washington—she left there to become director of the Richmond, Virginia, school. Miss Messick has just completed two three-year terms on the Board of Management of the AOTA and served on the

executive committee. She has also held offices in the District of Columbia Occupational Therapy Association and was president of the Virginia Occupational Therapy Association. Her main hobby is her cabin at Bivalve on the eastern shore of Maryland.



Ruth W. Brunyate, O.T.R.

Ruth W. Brunyate, O.T.R. institute program chairman, is director of occupational therapy at Children's Rehabilitation Institute, Reisterstown, Maryland (formerly at Cockeysville). Like most OT's, she has more hobbies than time, with oil painting her latest interest. She also makes her own designs for cross-stitch embroidery, likes sewing, dressmaking and travel and enjoys a weekend of exploring back country roads "looking for an abandoned 'ice house' to convert into an 'off-duty' estate." A graduate of the Philadelphia School of Occupational Therapy, she is a specialist in the development of new techniques in cerebral palsy treatment.



Margery Peple, O.T.R.

Margery Peple, registration committee chairman, originally wanted to be a doctor. She majored in biology at Westhampton College in Richmond and earned a Master's degree in psychology from the University of Richmond. It was while she was finishing her work in psychology that she first learned of occupational therapy through a newspaper article. Within two weeks, she was enrolled in occupational therapy at the Richmond Professional Institute. Since her graduation, she has been chief of rehabilitation at Pine Camp Tuberculosis Hospital in Richmond. Miss Peple is now president of the Virginia Occupational Therapy Association and has also served as vice-president and treasurer of the association. Her hobbies include pets, African violets and electric trains.

Violet H. Corliss, O.T.R., special meetings chairman, is chief occupational therapist at Upshur Street Hospital in Washington, D. C. Since entering the field in 1941, "Vi" has attended every national conference, has served as a delegate on the Board of Management of the national association,

been program chairman of a state association, and held virtually every office from president through committee chairmanships in the local OT associations. She still finds time for travel, amateur photography, dress-making, her book and etching collections, and the legitimate theater. A taste for foreign delicacies leads her to one of Washington's international restaurants on an average Friday night. She specializes in the rehabilitation of convalescent tuberculous patients and is a graduate of the Philadelphia School of Occupational Therapy.



Violet Corliss, O.T.R.

Harriet C. Zenick, O.T.R., educational exhibits chairman, is looking for a house—a house to put on her new half acre of land. In addition to the plot of ground her interests include cooking, music and modern jewelry. She is in charge of OT at the pulmonary disease division of the District of Columbia General Hospital and is a graduate of the School of Education at New York University.



Harriet Zenick, O.T.R.

Major Kathryn Maurice, WMSC (OT), special events chairman, was an art teacher and fashion artist until World War II when she decided to become an OT. A paragraph in a newspaper aroused her interest and later, "as I read the qualifications that applicants for Army training were required to have, I concluded ungrammatically, 'That's me they're talking to!'" Training at Richmond Professional Institute and a war emergency course prepared her for assignments at half a dozen Army hospitals. Major Maurice is chief of the occupational therapy section at Walter Reed Army Hospital, Washington, D. C. As a hobby she enjoys collecting primitive handicraft materials.



Major Maurice, O.T.R.

Major Kathryn Maurice, WMSC (OT), special events chairman, was an art teacher and fashion artist until World War II when she decided to become an OT. A paragraph in a newspaper aroused her interest and later, "as I read the qualifications that applicants for Army training were required to have, I concluded ungrammatically, 'That's me they're talking to!'" Training at Richmond Professional Institute and a war emergency course prepared her for assignments at half a dozen Army hospitals. Major Maurice is chief of the occupational therapy section at Walter Reed Army Hospital, Washington, D. C. As a hobby she enjoys collecting primitive handicraft materials.



Margaret Clarke, O.T.R.

enthusiasm was contagious and stimulating." This interest led her to Milwaukee-Downer, and from there to the Charleston County Association for the Blind. Listening to Margaret talk for even five minutes would tell you that she served in the U. S. Naval Reserve. Her present position in the VA followed her naval career. Foreign travel, African violets, fishing and nephews and nieces fill her spare time.

Margaret D. Clarke, publicity chairman, is at present chief of OT at the Veterans Administration Hospital in Richmond, Virginia. Her initial interest in OT can be explained best by her comment, "My father was instrumental in starting one of the first OT departments in a crippled children's hospital in Cincinnati, Ohio, and his

occupational therapist at Crippled Children's Clinic, Washington, D. C.



Ruth Hadra, O.T.R.

on the Appalachian Trail in the Blue Ridge Mountains of Virginia." She is also a folk dancing enthusiast and knows the dances of many countries. She is a graduate of the Philadelphia School of Occupational Therapy.

Ruth Hadra, O.T.R., hospitality chairman, is a cerebral palsy specialist with a yen for mountain climbing. She is assistant director of OT at Children's Rehabilitation Institute, Reisterstown, Md. (formerly at Cockeysville), and is president of the Maryland Occupational Therapy Association, but she says, "my favorite weekend is spent

In Memoriam



Marianne Chatterton, O.T.R.

and a year at a hospital in San Juan, Puerto Rico. She shares her husband's interest in rebuilding and refinishing old furniture, and loves to explore country roads or attend an auction.

Marianne M. Chatterton, O.T.R., printing chairman, is director of rehabilitation therapy at Spring Grove State Hospital, Catonsville, Md. Since her graduation from the Philadelphia School of Occupational Therapy she has held several interesting positions including a year as head of OT for the TB division of Baltimore city hospitals



Rena Graham, O.T.R.

good—no failures." A graduate of Richmond Professional Institute, she is now assistant chief

Rena M. Graham, O.T.R., chairman of the transportation committee, has worked with crippled children for the past five and a half years. Off-duty talents and hobbies include sailing, golf, sewing and cooking. Of the latter she says, "my roommate (another OT) and I love to try new recipes on our friends—so far so

Mrs. Meyrl Essling Baack
Duluth, Minnesota
Deceased May 6, 1953

Miss Lois Benson
Minneapolis, Minnesota
Deceased September 10, 1953

Miss Jane E. Bolam
Beverly Farms, Massachusetts
Deceased May 26, 1952

Miss M. Lillian Burke
New York, New York
Deceased April 13, 1952

1st Lt. Nancy Coyle
Ft. Bragg, North Carolina
Deceased December 2, 1952

Miss Eva M. Detwiler
Phoenixville, Pennsylvania
Deceased July 18, 1953

Mr. Harold G. Doyle
New York, New York
Deceased March 15, 1952

Mrs. Margaret S. Frisch
Philadelphia, Pennsylvania
Deceased August 17, 1952

Miss Francis E. Fuller
Jersey City, New Jersey
Deceased 1952

Miss Anne Grinsell
St. Louis, Missouri
Deceased December 29, 1952

Miss Mary Anna Goldberg
Los Angeles, California
Deceased July 17, 1952

Miss Sara B. Howell
Tuskegee Institute, Alabama
Deceased January 9, 1953

Mrs. Margaret E. Jones
Bangkok, Thailand
Deceased February 18, 1952

Mrs. Margaret C. Kelly
Oaklyn, New Jersey
Deceased 1952

Mr. Samuel Kline
Kings Park, New York
Deceased 1953

Mrs. Sarah B. Knerr
Lewistown, Pennsylvania
Deceased September 17, 1952

Miss Jessie Luther
Providence, Rhode Island
Deceased October 17, 1952

Mrs. Jessie Stewart Pierce
Vancouver, Canada
Deceased June 14, 1953

Mrs. Betty W. Richerson
Pontiac, Michigan
Deceased January, 1952

Miss E. Marie Ryan
Cleveland, Ohio
Deceased March 27, 1953

Mrs. Emmy Sommer
Denmark
Deceased June 11, 1952

Mrs. Edith Onthank Tour
Eugene, Oregon
Deceased January, 1952

Mrs. Delia W. Vail
Cleveland, Ohio
Deceased 1952

Mrs. Louise M. VanVranken
Pasadena, California
Deceased 1952

ADMINISTRATIVE PRACTICES AND PERSONNEL POLICIES

AMERICAN OCCUPATIONAL THERAPY ASSOCIATION

DEFINITION

Occupational therapy is a medically prescribed treatment supervised by a registered occupational therapist. The patient carries out a selected activity to assist in his physical, mental, social and economic adjustment and rehabilitation.

This service may be used by physicians from all medical specialties for its therapeutic value, as a diagnostic aid or in therapeutic testing and should be administered in relation to the patient's total medical care.

Evidence of qualification for employment as an occupational therapist is graduation from a curriculum of occupational therapy which is accredited by the Council on Medical Education and Hospitals of the American Medical Association, combined with current registration by the American Occupational Therapy Association. It is emphasized, however, that particular experience and/or specialized training may be indicated in employing therapists for specific positions.

DUTIES OF THERAPISTS AND RELATED PERSONNEL

1. Registered Occupational Therapists (OTR)

Director

In cooperation with the medical staff he plans overall treatment policies and procedures for the various diagnostic groups of patients. It is recommended that he be responsible, in cooperation with the administration, for the organization of the department, records, purchasing, budget, interviewing and approving therapists, and all pertinent programs including volunteer services, and student training and evaluation. He acts as liaison between the administration and line personnel. Inter-departmental relations and educational programs may be guided and supervised by him and community contacts relating to the department may come under his jurisdiction.

Assistant Director (Senior Therapist)

He is responsible to the director and assumes his duties in his absence. He treats patients under guidance of referring physicians and may have charge of student training. The supervision of volunteers and the assignment of work to other members of the department may be among his duties if so designated.

Staff Therapist

Administers treatment to patients, keeps records of patient load and materials, and may instruct and grade assigned students. He is responsible to the director or his designated representative.

2. Non-Professional Assistants

Realizing the acute shortage of qualified occupational therapists, it is recommended that where needed, non-professional help be engaged to assist in the department. These aides and technical assistants should be responsible to the director and should receive direct supervision of registered therapists. Specific standards for the training of such auxiliary personnel are highly recommended and some syllabi are available on request.

3. Volunteers

It is recommended that volunteers who work in the department be oriented to their duties by the director or assistant director as the case may be, and that they be assigned to work under the close supervision of a registered occupational therapist. Planning of a volunteer program

should be done by the director in accordance with the policies of the institution.

4. Clerical and Maintenance Personnel

Clerical and maintenance work, messenger and telephone service, and matron and/or attendant help should be provided as needed.

PROFESSIONAL DEVELOPMENT

In order to further their professional growth, it is recommended that therapists be encouraged to attend professional conferences and to engage in research and advanced study. Department schedules should be so organized to allow staff members to do this without loss of compensation or vacation time. Financial assistance is most desirable when possible. Those who attend should be required on their return to report fully so that others may profit from it.

It is not desirable to have a department staffed only by one therapist who must be responsible for organization and administration as well as treatment. Patients cannot be adequately and consistently treated under these conditions. If necessary, however, it is recommended that he be an experienced therapist and employed at the senior therapist salary range.

Student Training

Affiliating students sent to approved training centers from accredited schools are a source of stimulation and provide an opportunity to try out those who may be employed later. Both the institution and the therapists must accept the responsibility for the student program, which should provide comprehensive training and experience in the medical area for which he is affiliating. A student should receive a physical examination when desirable, and should be eligible for emergency medical care if it is required during affiliation.

It is recommended that not more than two students be assigned for training to one registered therapist at any one period.

WORKLOAD

In planning proper work loads for personnel the following factors should be considered:

1. The amount of individual preparation and finishing of treatment materials which must be done by the therapist
2. The amount of teaching, devising of special equipment and other non-treatment work required
3. Available space to work in
4. The accessibility of both patients and cooperating personnel
5. The number of hours per day during which patients may be treated
6. The number of patients who may be treated in groups as opposed to those who must be treated individually
7. The length of time specific patients must be treated

The above factors merit careful study in arranging work loads which allow for effective treatment of every patient without overloading the therapist or wasting his time.

The following table is suggested as a basis on which to apply the aforementioned consideration. The numbers sug-

gested apply to situations wherein patients with acute conditions are treated.

Pediatrics—20 treatments per day
Tuberculosis—30 treatments per day
GM&S—20 (acute hospital; more where convalescent)
Physical Dis.—15 treatments per day
Neuropsychiatric—25 treatments per day
Cerebral Palsy—10 treatments per day

SALARIES

Salary levels should be established in close relationship to those of related professions with comparable education and responsibilities. Local conditions such as availability of personnel, housing and transportation facilities are factors to be considered in establishing salary levels. It is recommended that provisions be made for regular increments based on length of service and merit. Grading of positions from administrative head to staff therapist with supervisory and intermediate positions makes for efficiency, especially in large departments, and serves as an incentive to newly employed therapists.

The following schedule based on a 40 hour week is recommended as a guide:

Staff therapist (without experience).....	\$3500-\$4200
Senior therapist (2 years experience).....	4200- 5000
Director (4 years or more experience).....	5000- 7000
Coordinator or Consultant.....	6000- 8000

These salary levels are recommended as being in realistic relationship to those in state service, to those in federal service, which include public health, civil service, and the armed forces, and to salaries paid in voluntary agencies and hospitals. They are subject to revision from time to time and further information can be obtained upon request from the American Occupational Therapy Association.

VACATIONS, SICK LEAVE, HOLIDAYS, INSURANCE

It has been demonstrated that effective treatment of the patient makes heavy demands on the physical energy and personal stamina of the therapists. Therefore an adequate vacation policy is recommended to provide the patient with optimum treatment. Three to four weeks paid vacation time after each year of service is suggested.

Sick leave on the basis of one day a month is suggested, and that this be cumulative, where allowed by institutional policy. Leave without pay should be arranged if possible in the case of maternity for those therapists who have worked two or more years and who have a serious intention of returning to work.

Retirement or pension plans, and health insurance plans are highly recommended.

A therapist on temporary status should have the same rights and privileges governing minimum salary, hours of work and holidays that apply to the permanent staff. Sick leave and vacation time should be pro-rated.

Part-time therapists should receive compensation pro-rated on the basis of full-time salary. Other benefits can be determined by institutional policy.

TERMINATION OF EMPLOYMENT

If the therapist's employment is terminated by the employer, it is desirable that he be given one month's notice with reasons for his separation stated in writing. If the therapist resigns, he should present his reasons in writing giving as long a notice as possible, but at least one month. He is entitled to earned terminal vacation pay.

AJOT VIII, 3, 1954

FOR MORE INFORMATION

The American Occupational Therapy Association presents these recommendations in recognition of its responsibility to both employers and occupational therapists. Additional published information is available as indicated and further inquiry is invited regarding any of these matters.

List of Literature and Materials on Occupational Therapy—free

List of Accredited Schools—free

Manual for the Organization and Administration of an Occupational Therapy Department—\$1.75

List of Films and Slides on Occupational Therapy—free
"Planning the Complete O. T. Service" . . . West and Clark, *Hospitals*, October, 1951 (reprint)—\$.50.

Guide for Training Course—Occupational Therapy Volunteer Assistants

Proposed In-Service Training Program for Psychiatric Aides in O. T.—\$.10

Proposed In-Service Training Program for O. T. Aides in TB—\$.10

The American Occupational Therapy Association
33 West 42nd Street
New York 36, New York

DELEGATES DIVISION WASHINGTON

Delegate-Reporter, Shirley M. Bowing, O.T.R.

We can report two-fold success with our first annual scholarship bazaar which was held in May, 1953. Not only were we able to offer two half-tuition scholarships, but many members have commented that this major group project has done more to promote esprit de corps than any number of meetings or conferences. Our enthusiasm is now combined with the wisdom that comes only from experience as we start work on our 1954 spring bazaar.

The recruitment committee, with the help of the OT school and several other departments, is now completing our major recruitment project of the year. We are almost ready to put into the mail about 500 file folders labeled "OCCUPATIONAL THERAPY—a growing profession for MEN and WOMEN interested in MEDICINE, TEACHING and PEOPLE," and containing considerable locally prepared material as well as the new brochures, supply order forms and posters from our national office. These will go to libraries in the state; and for the first time, as we give talks to school or community groups, we can say with assurance, "You will find additional information on occupational therapy in your local library."

As our association membership grows, we are finding it increasingly necessary and possible to participate actively with other professional groups in the state. Our first formal step in this direction has been to make application for association membership in the Washington State Health Council.

We are particularly pleased to report that the Washington State Elks Association and the Washington Society for Crippled Children and Adults are both announcing substantial scholarship programs for 1954 which are open to students or prospective students in occupational therapy.

OFFICERS

President.....	Myrla Smith, O.T.R.
Vice-President.....	Patsy Brittain, O.T.R.
Secretary.....	Lenore Secord, O.T.R.
Treasurer.....	Cuma Hiner, O.T.R.
Delegate.....	Shirley Bowing, O.T.R.
Alternate Delegate.....	Nancy Sanzenbach, O.T.R.

MINNESOTA

Delegate-reporter, A. Genevieve Anderson, O.T.R.

During the year 1952-53, a drastic "coup" by the state legislature in reducing funds for mental hospitals and a series of very unfavorable newspaper articles focused the attention of the M.O.T.A. on licensing and related subjects. General and special meetings were held to inform the membership of the problem and to give all possible opinions on its solution, enlisting the help of physicians, a lawyer and representatives of several ancillary services. Opinion was divided, but it was decided that we should put our efforts into an educational program, aimed at both the public and the members of the legislature, before the next session in 1955. A committee is continuing this work.

Interest has also been maintained in programs with a practical benefit. A very successful series was held at the Upper Midwest Association conference in Minneapolis last May. Miss Patricia Exton was guest speaker, discussing "Patient-Therapist Relationships" at an open meeting attended by several from other fields, and speaking on "Occupational Therapy in Adjunctive Therapies" at an evening banquet. At a third meeting, Dr. Knight Aldrich, University psychiatrist, acted as moderator for a panel made up of three local therapists and Miss Exton and representing the various medical specialties. Part of the discussion was led by the panel therapists with the audience breaking up into interest groups and Dr. Aldrich summarizing the findings. All three programs were tape-recorded. A similar panel discussion was held at the Minneapolis VA Hospital this year on the subject "Specific Evaluation of Patient Progress."

The recruitment committee has been working with the State Department of Public Health, who are consolidating recruitment efforts of physical therapists, occupational therapists, dieticians and medical technologists. A great number of brochures and other materials from AOTA have been distributed to schools and libraries throughout the state, and MOTA exhibits have appeared at both the Upper Midwest Hospital conference and the meeting of the Minnesota Medical Society.

At present, MOTA is concentrating on plans and financing for the 1956 AOTA conference. The committees are selected, and we hope that the next two years will see a great conference in the making.

OFFICERS

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Elected Board Members.....	Elsie Anderson, O.T.R.
	Pauline Phelps, O.T.R., Marian Eliason, O.T.R.

OREGON

Delegate-Reporter, Grace Black, O.T.R.

For the year 1953, the association endeavored to acquaint each therapist in the area with the program and staff of the various departments, to provide speakers at the meetings enlisted from the medical and allied fields, to encourage recruitment activity by individual members, and to augment the association budget so that financial aid could be given the delegate for conference attendance.

The above aims have been fairly well met in the following manner: Meetings are scheduled for a year ahead on the first Friday of every month except January, July and August. Weather conditions are too uncertain for January. A social event is the picnic in June. Each meeting is held in a different department in the area, alternating the location in an effort to equalize travel time; Salem

is 50 miles and Eugene 100 miles from Portland.

Extremely interesting meetings have been held this past year and the result has been an increased attendance. A few of the special programs have been: a psychiatrist presented the case history of a woman patient originally diagnosed as manic-depressive and later re-diagnosed as schizophrenic; showing of a rehabilitation film; discussion of the present-day treatment of pulmonary tuberculosis by a medical specialist in the field; a clinical psychologist outlined his functions in the neuro-psychiatric and pulmonary tuberculosis units, emphasizing the use of diagnostic tests, such as the Rorschach and T.A.T.

Our successful money-making project for the year brought the members together in congenial work-sessions and added a pleasing sum to the treasury. A "Rickey, Jr." doll was purchased and completely outfitted. The Vancouver, Wash., VA staff wove the bassinet, the staff of the Oregon State Hospital, Salem, Ore., built a wardrobe fitted with miniature coat-hangers, everyone else pitched in to the making of the various and sundry articles of clothing. Among the items were diapers, slips, shirts, rompers, sun-suits, dresses with matching caps, bibs and de luxe items such as rubber lined panties to match the dresses. It was an impressive project when everything was assembled. Chances were sold at 4 for a \$1.00 and \$98.45 was cleared. Plans are in progress for a repeat performance this year with a higher financial goal.

Occupational therapists in the area who are "at home" have been the staunchest supporters in attendance and cooperation. Occupational therapy aides are made welcome at any and all meetings and have contributed their share to the project for the year. They have voluntarily asked for membership in the association.

Publicity material has been distributed to the individual members who have been encouraged to speak to student groups in high schools, colleges and to adult groups. All Oregon high schools have received OT brochures. Mats received on request from the national office were sent out to 21 newspapers in Oregon and Vancouver, Wash. Any newspaper with a circulation of 3,000 or more received a mat, in this way the state was completely covered.

OFFICERS

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Vice-President.....	Betty Irle, O.T.R.
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Alternate Delegate.....	Mary H. Boyce, O.T.R.

Book Reviews

THE THERAPEUTIC COMMUNITY

A New Treatment Method in Psychiatry

Maxwell Jones, M.D., et al.

Published by
Basic Books, Inc.
New York

1953

183 pp.

Reviewed by: Bertha J. Piper, O.T.R.

The community method of treating long-standing neurotics and unemployable misfits evolved from a vast "social conscience" nucleated in the Disabled Persons (Employment) Act of 1944 in England. A "hard core" of chronic unemployed persons has caused a complex sociological phenomenon within the British economic structure since the war, increasing to nearly one-million registered disabled persons in 1950, for which twelve Industrial Rehabilitation Units (I.R.U.'s) have been set up staffed by Disabled Resettlement Officers (DRO's) vocational guidance officers, social workers, chief occupational supervisors, and doctors. Social and vocational roles are provided

within the hospitals where workshop arrangements attempt to stimulate ordinary conditions.

Since 1948 over eighty per cent of the disabled persons treated at these centers have found employment or been placed in training. In addition to IRU's, the government has established over eighty factories called Remploi factories for sheltered employment.

Functioning under the aegis of the Ministries of Health, Labour and Pensions, and with all treatment free, the Industrial Neurosis Unit was established at Belmont Hospital in 1947 to receive cases, "not frankly psychotic," from all parts of England. The length of stay in the hospital ranges from two to four months; a few stay as much as a year; some leave within a matter of hours after arrival. A "resettlement team" is responsible for operating the "therapeutic community," which consists of four psychiatrists, one psychologist, a psychiatric social worker, two disablement resettlement officers from the Ministry of Labour, five occupational instructors, one research technician, and a nursing staff of about twenty.

Placement conferences are held weekly by the resettlement staff; reports from all members are presented to the doctor in charge of each case; a copy is sent to the man's local employment exchange on discharge from hospital.

The main purpose of this 100-bed unit is to examine the multifarious problems of chronic unemployed persons whose illnesses are characterized by early schizophrenia, drug addiction, sexual perversions, and chronic forms of psychoneuroses. Psychological testing procedures consist of vocational tests, vocabulary tests, Wechsler I.Q., projective and deterioration tests. Aptitude tests are believed to have insignificant value in these cases but high emphasis is placed upon attitudes toward work. Further treatment comprises drama therapy with staff and patients participating, psychotherapy, and one-hour discussions daily on some sociological topic bearing directly on the life of the working man.

Workshop facilities include hairdressing, tailoring, plastering, carpentry and bricklaying, not for training in specific trades but for maintaining job performance in semi-skilled and unskilled tasks. Work therapy is compulsory. Some patients are employed in the neighboring communities. Specified hours of work schedules must be adhered to. No "diversionary time" in occupational therapy is permitted but art classes are encouraged for leisure hours.

Earlier experiments in "social psychiatric development" were set up at Mill Hill Emergency Hospital (near London) during the war known as The Effort Syndrome, a 100-bed unit for patients suffering from effort syndrome. The average length of stay in this hospital was three to eight weeks. Psychodrama pertaining to social problems was used as social therapy technique, in place of the office interview. Arrangements were made with a local technical college to teach clerical and engineering subjects to aid the transition from Army to civilian life.

Following this experiment at Mill Hill, the Southern Hospital at Dartford (twenty-miles from London) was established at the end of the war for repatriated prisoners from the European theater. The average stay in hospital was six to eight weeks. The aim of the staff was to find social and vocational roles for the men while still in hospital through contacts with clubs, firms, shops and farms. Patients were taken from the hospital by bus to their different occupations in the community each day. Work therapy in carpentry was available in the hospital for patients too ill to be given work in the community.

Disciplinary theories were followed up by social development on permissive lines. That is, free communication existed between the various groups, problems were presented for discussion and guidance was sought from the group. Individual persuasion, in some cases, attempted to help a patient become aware of the social structure of the

group and of the need to maintain it for the good of all. Follow-up studies were made on one-hundred ex-prisoners of war patients for data on home adjustment and work resettlement. The Dartford unit represented the most maladjusted one percent of the hundred-thousand repatriates from the European theater of war, and the success of their program led to considerable growth of interest in "therapeutic communities."

SPEECH PROBLEMS OF SCHOOL CHILDREN

Printed by

National Society for Crippled Children and Adults
61 pages, printed 1953.

Reviewed by: Adaline J. Plank, O.T.R.

A Symposium Co-Sponsored by Division of School Psychologists and Division of Educational Psychology of the American Psychological Association, American Speech and Hearing Association, and the National Society for Crippled Children and Adults.

This brochure is a collection of seven papers the authors of which are authorities in their fields and give a general idea of the kinds, etiology and treatment of speech defects of school children. The material is directed to the public school teacher in order to acquaint her with the causes and effects of common speech disorders that she might find among her pupils, to inform her what resources are available for treatment for such children and what she herself can do to aid in the correction of such defects. Any other person, however, working on the educational level with children can benefit similarly from this information. Dr. Westlake's article, "Methods of Training Children with Organic Involvements," is helpful to occupational therapists as he mentions some speech training techniques for the cerebral palsied child which can be used in occupational therapy for general teaching.

Nothing is said here of aphasia as such, perhaps because it is too complex a subject for the purpose of this meeting.

COOPERATIVE PLANNING FOR AFFILIATIONS

Henrietta Doltz

The American Journal of Nursing, Oct., '53

A description of a new program offered by the School of Nursing of the Oregon Medical School. The hospital invites the faculty of their affiliates' schools to study the program, see the students in active participation and to discuss common problems. This is planned as an all-day seminar for the students affiliating in pediatric and tuberculosis nursing.

Previously the problems and interpretations of the affiliates had been discussed individually with each school. Now an agenda is arranged with one area being discussed in the morning and another in the afternoon.

This switch to a conference type consultation plan has proved valuable to the schools and resulted in a decrease in the number of problems.

REHABILITATION OF THE OLDER WORKER

Edited by Wilma Donahue, James Rae, Jr., and

Rodger B. Berry

Published by

University of Michigan Press, Ann Arbor

1953

\$3.25, 200 pp.

Reviewed by: Grace C. Hildenbrand, O.T.R., M.A.

A positive approach to the rehabilitation of older workers is well depicted in the findings and recommendations recently expressed at the annual conference on aging held at the University of Michigan.

John L. Thurston, deputy administrator of the Federal

Security Agency, gives the reader a view of rehabilitation in the present scene and the role of the federal government in rehabilitation of the older worker. Dr. Howard Rusk, professor and chairman of the department of physical medicine and rehabilitation at New York University-Bellevue Medical Center, presents valuable material concerning the demography of an aging population, the need for immediate action, a gerontological evaluation-rehabilitation clinic and the medical department, vocational and job-placement service. Of equal interest are the conference board hearings on medical aspects of rehabilitation which cover such aspects as rehabilitation and its services, rehabilitating the "whole individual," planning hospital rehabilitation programs and the community rehabilitation center.

The findings of the conference board on psychosocial and economic aspects of rehabilitation would be of interest to those of us who are concerned with the work capacity of older citizens, the psychological impact of physical disability, pension plans, rehabilitation and early detection of disability in industry.

Much food for thought stems from the conference board study on employment and placement which encompasses such elements as: productivity of the disabled, factors in successful placement, responsibility for placement, wage levels, employment of the aged, self employment and the role of the sheltered workshop.

Further studies on rehabilitation services and programs were devoted to auxiliary services in rehabilitation, the feasibility of rehabilitation services, research in rehabilitation services and personnel in such programs. James W. Rae's chapter dealing with hemiplegia and paraplegia in achieving rehabilitation will interest many.

Albert Abrams and Clark Tibbitts ably cover such factors as public education, community rehabilitation services, old age homes and legislative changes. Frank Krusen devotes an entire chapter to reviewing physical medicine and rehabilitation and covering the nature and magnitude of the problem, medical aspects, psychosocial problems and economic implications. This is another book well worth reading for those of us interested in this growing field of geriatrics.

BRACES, CRUTCHES, WHEELCHAIRS

Mode of Management
George G. Deaver, M.D.
Antony L. Britts, M.D.

Published by

New York University-Bellevue Medical Center
1953 61 pages

Reviewed by: Eleanor L. Ring, O.T.R.

A monograph—the fifth in a series of rehabilitation monographs—prepared to aid in the selection, use and care of braces, crutches and wheelchairs. The various types of leg braces are pictured and described clearly with instructions on correct bracing for specific weaknesses and deformities. Especially good for clarifying brace terminology for occupational therapists.

Muscles of the upper extremity particularly needed to manipulate crutches are listed with exercises to prepare for crutchwalking. Factors to consider in determining which of the crutch gaits to prescribe are discussed. The standard crutch gaits are clearly and simply described.

The unit on wheelchairs and wheelchair accessories includes: description and pictures of four basic types of chairs with instructions on how to order to suit the individual needs of the patient, placement of wheels, size of seat, adaptations of back rest, types of arm rests, leg rests, use of brakes, "squeezers," etc. Hints on weekly, monthly and yearly care of equipment are given.

TRAINING AND RESEARCH IN STATE MENTAL HEALTH PROGRAMS

Summary and Recommendations

Published by

The Council of State Governments
Chicago 37, Illinois

Reviewed by: Bertha J. Piper, O.T.R.

This booklet is a twelve-page summary of the report contained in *Training and Research in State Mental Health Programs* presented at the governors' conference, August, 1953, in Chicago. It emphasizes the responsibilities which the states should assume in training personnel, providing stipends for graduate training in psychiatry, occupational therapy, clinical psychology and allied professions, in extending studies of methods in new preventive measures and in developing greater effort with laboratory research. Interstate cooperation by means of periodic regional mental health conferences is recommended, and the advisability of an interstate clearinghouse is suggested in order that experiences and findings from various localities may be made more easily accessible and helpful to all.

The section on *Research* might well produce a mixture of feelings ranging from solemn wonder to elation when the research-minded occupational therapist reads that, "The most critical prerequisites to research is scientific personnel," and "... research activities in state mental hospitals should be coordinated under a research director . . . clinical director or superintendent." Occupational therapy research, likewise, we might add, could be most effectively accomplished under the coordinated planning of a research counsellor in order to show the real significance of its relative value, preferably on a state-wide basis.

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SCHOOLS OFFERING COURSES IN OCCUPATIONAL THERAPY

Name of School	Name and Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students
Boston School of Occupational Therapy Affiliated with Tufts College	Mrs. John A. Greene, President Boston School of Occupational Therapy, 7 Harcourt Street Boston 16, Massachusetts	\$650.00/acad. year \$200 clin. training \$650/acad. year \$200 clin. training	a. Advanced Course (Diploma) b. Degree (B.S. in Education) from Tufts plus B.S.O.T. diploma	*College degree or accredited professional training As for the college; qualified transfer student (Soph. and Jr. year)	Sept. Sept.	1 acad. yr. plus 10-12 mos. clin. training 4 acad. yrs. plus 12 mos. clin. training	Yes Yes Yes
Colorado Agricultural and Mechanical College School of Home Economics	Asst. Prof. Marjorie Ball, O.T.R. Director of Occupational Therapy, School of Home Economics and Mechanical College, Ft. Collins, Colo.	\$132/acad. year \$362 for out-of-state residents, \$55 clin. training	a. Degree (B.S. plus certificate) b. Adv. standing certificate	As for the College; a. qualified transfer student b. college degree	Sept. any quarter	a. 4 acad. yrs. plus 10 mos. clin. training b. 1 acad. yr. plus 10 mos. clin. training	Yes Yes Yes
Columbia University College of Physicians and Surgeons	Asst. Prof. Marie Louise Franciscus, O.T.R. Director of Training for Occupational Therapy Columbia University, College of Physicians & Surgeons, 630 West 168th Street, New York 32, New York	\$750/acad. year As above	a. Degree (B.S.) Faculty of Medicine of Medicine b. Advanced Standing (Certificate)	*2 yrs. college *College degree or accredited professional training	Sept. Sept.	2 acad. yrs. plus 8 mos. clin. training 1 acad. yr. plus 9 mos. clin. training	Yes Yes Yes
Illinois, University of College of Medicine	Assoc. Prof. Beatrice D. Wade, O.T.R. Head, Department of O.T. University of Illinois 1853 West Polk Street Chicago 12, Illinois	\$55 a semester \$101 for out-of-state residents	Degree (B.S. in O.T.) from College of Medicine	As for the College of Liberal Arts	Oct. Feb.	3 acad. yrs. Liberal Arts College 16 months College of Medicine & Clinical affiliations	Yes Yes
Iowa, State University of College of Liberal Arts and College of Medicine	Asst. Prof. Elizabeth Huntberry, O.T.R. Director of Occupational Therapy College of Medicine State University of Iowa Iowa City, Iowa	a. \$156/acad. year \$366 for out-of-state residents b. \$156/acad. year \$256 for out-of-state residents	a. Degree (B.A.) from College of Liberal Arts, plus Certificate from College of Medicine b. Advanced Standing (Certificate)	*As for the university	Sept. Feb.	4 acad. yrs. plus 10 mos. clin. training	Yes Yes
Kalamazoo, School of Occupational Therapy of Western Michigan College of Education	Assoc. Prof. Marion R. Spear O.T.R., Director of Occupational Therapy Kalamazoo, Michigan Western Michigan College of Education Kalamazoo 45, Michigan	\$140/acad. year \$215 for out-of-state residents As above	a. Degree (B.S. with major in Occupational Therapy) plus diploma b. Advanced Standing (Diploma)	As for the college; qualified transfer student Degree	Sept. Sept. Feb.	Approximately 3 1/2 acad. yrs. plus 9 mos. clin. training 2-3 semesters plus 9 mos. clin. training	Yes Yes Yes

*Schools having additional requirements

Name of School	Name and Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students M	Students F
Kansas, University of	Assoc. Prof. Nancie B. Greenman, O.T.R., Director of Occupational Therapy University of Kansas Lawrence, Kansas	\$110/acad. year \$250 for out-of-state residents	Degree (B.S. in O.T.)	As for the university; qualified transfer student	Sept. Feb.	3½ acad. yrs. plus 12 mos. clin. training	No	Yes
Michigan State Normal College	Asst. Prof. Frances Herrick, O.T.R. Director of Occupational Therapy Michigan State Normal College Ypsilanti, Michigan	\$140/acad. year \$210 for out-of-state residents	Degree (B.S. with major in O.T.)	*As for the college	Sept. Feb. June	4 acad. yrs. plus 10 mos. clin. training	Yes	Yes
Mills College	Mrs. Anne N. Turchi, O.T.R. Director of Occupational Therapy Mills College Oakland 13, California	\$800/acad. year \$120 clin. training \$370/acad. year \$130 clin. training	a. Degree (B.A. with major in O.T.) b. Certificate	As for the college; qualified transfer student Degree from accredited college	Sept. Feb.	4 acad. yrs. plus 9 mos. clin. training	No	Yes
Milwaukee-Downer College	Prof. Henrietta McNary, O.T.R. Director, Department of Occupational Therapy Milwaukee Downer College 2512 East Hartford Ave. Milwaukee 11, Wisconsin	\$400/acad. year \$300 clin. training	a. Degree (B.S. with major in O.T.) b. Diploma	*As for the college; qualified transfer student Degree from accredited college or professional equivalent	Sept.	4 acad. yrs. plus 10 mos. clin. training 2 acad. yrs. plus 10 mos. clin. training	No.	Yes
Minnesota University of School of Medicine	Miss Berghild Hansen, O.T.R. Director of Occupational Therapy University of Minnesota Minneapolis, Minnesota	\$187.55/acad. year \$397.55 for out-of-state residents	Degree (B.S. in O.T.)	2 years Arts College; qualified transfer student	Sept.	3½ acad. yrs. plus 9 mos. clin. training	Yes	Yes
Mount Mary College	Sister Mary Arthur, O.T.R. Director of Occupational Therapy Mount Mary College Milwaukee 10, Wisconsin	\$250/acad. year	Degree (B.S.) plus Certificate	As for the college; qualified transfer student	Sept.	4 acad. yrs. plus 9 mos. clin. training	No	Yes
New Hampshire, University of College of Liberal Arts	Miss Ruth McDonald, O.T.R. Supervisor of Occupational Therapy University of New Hampshire Durham, New Hampshire	\$250/acad. year \$600 clin. training \$500 for out-of-state residents \$135 clin. training	Degree (B.S. with major in O.T.) plus Certificate	*As for the university	Sept.	4 acad. yrs. plus 10 mos. clin. training	Yes	Yes

Name of School	Name and Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students M	Students F
New York University School of Education	Assoc. Prof. Frieda J. Behlen, O.T.R. Director of Occupational Therapy Curriculum Washington University New York 3, New York	\$500/acad. year \$127.50 clin. training As above	a. Degree (B.S.) plus Certificate b. Certificate c. Graduate (M.A.)	*As for the university; qualified transfer student One year college O.T.R. or eligible for O.T.R. with college degree	Sept. Feb. June As above	4 acad. yrs. plus clin. training 1 1/2 acad. yrs. plus 10 mos. clin. training	Yes	Yes
Ohio State University College of Education	Miss Barbara Locher, O.T.R. Chairman, O.T. Department The Ohio State University Columbus 10, Ohio	\$135 per year \$225 per year for out-of-state residents	Degree (B.S. in O.T.)	*As for the university; qualified transfer students	Sept. Jan. March	10 quarters plus 10 mos. clin. training	Yes	Yes
Pennsylvania, University of the School of Auxiliary Medical Services	Prof. Helen S. Willard, O.T.R. Director, Phila. School of O.T. 49 South 19th Street Philadelphia 46, Pa.	\$700 acad. year \$100 clin. training	a. Degree (B.S. in O.T. plus Certificate of proficiency) b. Certificate of proficiency	*As for the university; qualified transfer student *College degree	Sept. Sept.	4 acad. yrs. plus 10 mos. clin. training 1 acad. yr. plus 10 mos. clin. training	Yes	Yes
Puget Sound, College of	Asst. Prof. Shirley Bowling, O.T.R. Director of Department of Occupational Therapy College of Puget Sound Tacoma 6, Washington	\$400/acad. year \$100 clin. training	a. Degree (B.S. in O.T.) plus certificate b. Special c. Advanced Standing with certificate	a. As for the college; qualified transfer student b. One year college c. College degree	Sept. Feb. June Sept. Feb. June June	a. 4 acad. years plus 9-12 mos. clin. training b. 2 acad. yrs. plus 10 mos. clin. training c. 22 mos. 1 summer, 1 acad. yr. plus 9-12 mos. clin. training	Yes	Yes
Richmond Professional Institute of the College of William and Mary	Miss H. Elizabeth Messick, O.T.R. Director, School of Occupational Therapy Richmond Professional Institute Richmond 20, Virginia	\$200/acad. year \$300 for out-of-state residents	a. Degree (B.S. in O.T.) b. Certificate c. Advanced Standing (Certificate)	As for the college; qualified transfer student One year college (30 semester credits) College degree	Sept. Sept. Sept.	4 acad. yrs. plus 9 mos. clin. training 2 acad. yrs. plus 9 mos. clin. training 1 acad. yr. plus 9 mos. clin. training	Yes	Yes
Saint Catherine, College of	Sister Jeanne Marie, O.T.R. Director of Occupational Therapy The College of Saint Catherine St. Paul 1, Minnesota	\$210/acad. year	Degree (B.S.)	*As for the college; qualified transfer student	Sept. Jan. March	4 acad. yrs. plus 9 mos. clin. training	No	Yes
San Jose State College	Assoc. Prof. Mary Booth, O.T.R. San Jose State College San Jose 14, California	\$45/acad. year As above	a. Degree (B.A.) b. Advanced Standing (Certificate)	As for college College degree	Oct. Jan. April As above	4 acad. yrs. plus 9 mos. clin. training 1 acad. yr. plus minimum of 9 mos. clin. training	Yes	Yes

Name of School	Name and Address of Director	Tuition	Type of Course	Entrance Requirements	Classes Start	Length of Course	Students M F
Southern California University of Arts and Sciences	Assoc. Prof. Angeline Howard, O.T.R. Head of Department of Occupational Therapy University of Southern California Box 274, Los Angeles 7, California	\$540-\$576/acad. year \$50 clin. training \$594/acad. year \$75 clin. training \$340/acad. year	a. Degree (B.S.) plus Certificate b. Advanced Standing (Certificate) c. Graduate (M.A.)	*As for the university College degree OTR or eligible for OTR with college degree 1 yr. experience in O.T.	Sept. Feb. July As above Sept. Feb.	4 acad. yrs. plus 9 mos. clin. training 1 acad. yr. plus 9 mos. clin. training 1 acad. yr.	Yes Yes Yes
Texas State College for Women	Assoc. Prof. Fanny B. Vanderkool, O.T.R. Director of Occupational Therapy Department Texas State College for Women Denton, Texas	\$50/acad. year \$150 for out-of-state residents	a. Degree B.S. or B.A. with major in O.T. b. Advanced Standing (Certificate)	a. As for the college b. College degree	Sept. Feb. Sept. Feb.	a. 4 acad. yrs. plus 9 mos. clin. training b. 9 mos. on campus, 9 mos. clin. training	No Yes
Texas University of Medical Branch	Mrs. Cynthia Schulerman, O.T.R. Director of Occupational Therapy University of Texas, Medical Branch Galveston, Texas	\$100/acad. year \$60 for out-of-state residents	Certificate	2 yrs. of college or college degree	January	16 mos. incl. clinical training	Yes
U. S. Medical Serv. School of Occupational Therapy	Myra McDaniel, Major, WMSC (OT) Address Inquiries: The Surgeon General Department of the Army Washington 25, D. C. Attn.: Chief, Personnel Div.	None	Advanced	College degree, to include Fall 15 hours of science, sociology and/or psychology	18 months		No Yes
Washington University School of Medicine	Asst. Prof. Erna L. Slonek, O.T.R. Director, Department of Occupational Therapy Washington University School of Medicine 4567 Scott Avenue St Louis 10, Missouri	\$525/acad. year \$100 clin. training \$325/acad. year \$100 clin. training	Degree (B.S. in O.T.) Advanced Standing (Certificate)	60 semester college credits 36 of which are in required subjects College degree	Sept. Sept.	2 acad. yrs. plus 10 mos. clin. training 1 acad. yr. plus 10 mos. clin. training	Yes Yes
Wayne University College of Liberal Arts and College of Education	Asst. Prof. Barbara Jewett, O.T.R. Director of Occupational Therapy Wayne University Detroit 1, Michigan	\$195/acad. year \$97.50 clin. Training \$395 for out-of-state residents \$197.50 clin. training	a. Degree (B.S. in O.T.) b. Advanced Standing (Certificate)	As for the university *College degree	Sept. Feb. June As above	3½ acad. yrs. plus 10 mos. clin. training 1 acad. yr. plus 10 mos. clin. training	Yes Yes
Wisconsin University School of Medicine	Asst. Prof. Caroline G. Thompson, O.T.R. Director of Occupational Therapy University of Wisconsin 1300 University Ave. Madison 6, Wisconsin	\$150/acad. year \$450 for out-of-state residents	Degree (B.S. in O.T.) from School of Education plus Certificate from School of Medicine	As for the university	Sept. Feb. June	4 acad. yrs. plus 10 mos. clin. training	Yes

Calendar of Events

June 27-July 2, 1954

Annual Conference of the American
Physical Therapy Association
Statler Hotel
Los Angeles, California

June 28-30, 1954

University of Michigan
Workshop on Aging
Ann Arbor, Michigan

July 19-30, 1954

Teachers College, Columbia University
Work Conference on Improving
Staff Relations
New York, New York

August 2-13, 1954

Teachers College, Columbia University
Work Conference on Planning
Workshops and Conferences
New York, New York

August 16-21, 1954

First Congress of the World
Federation of Occupational Therapists
University of Edinburgh
Edinburgh, Scotland

September 6-10, 1954

Third International Poliomyelitis Conference
University of Rome, Orthopedic Clinic
Rome, Italy

September 12-15, 1954

Second International Congress of Cardiology,
Washington, D.C.

September 16-18, 1954

Annual scientific sessions of the American
Heart Association, Washington, D.C.

September 13-17, 1954

World Conference of the International Society for
the Welfare of Cripples
The Hague, Netherlands

October 8-9, 1954

Annual Meeting of the Academy
of Psychosomatic Medicine
Plaza Hotel
New York, New York

October 16-23, 1954

Annual conference of the American Occupational
Therapy Association
Shoreham Hotel
Washington, D. C.

October 24-28, 1954

Annual Convention of the
National Rehabilitation Association
Lord Baltimore Hotel
Baltimore, Maryland

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Classified advertising accepted for POSITIONS WANTED and POSITIONS AVAILABLE only. Minimum rate \$3.00 for 3 lines; each additional word ten cents. (Average 56 spaces per line). Copy deadline first of each month previous to publication.

POSITIONS AVAILABLE

Summer camp positions open for registered occupational therapists, June 26 through August 25. Apply: The Pennsylvania Society for Crippled Children and Adults, Inc., 1107 North Front Street, Harrisburg, Pennsylvania.

Fairfield State Hospital, Newtown, Conn. Occupational therapists and senior occupational therapists. \$3,120-\$4,620; 40-hour week; well-equipped working units; good living facilities; clinical training program.

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Occupational therapist needed for treatment and workshop program. Ideal working conditions and salary commensurate with ability. Write Mrs. E. P. Storer, Managing Director, Sheltered Workshop for the Disabled, Inc., 200 Court St., Binghamton, New York.

Chief occupational therapist for largest private mental hospital in U.S.A., 750 bed, serving state patients also, no supervision of hospital industries. Progressive OT department of outstanding history. Challenging opportunities, beautiful surroundings. Student training affiliation center. Maintenance available. Apply Dr. J. Butler Tompkins, Superintendent, Brattleboro Retreat, Brattleboro, Vermont.

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sonnel practices. Also opening for registered OT. Write Mrs. Alma Adams, acting director of occupational therapy department, Cleveland Rehabilitation Center, 2239 East 55th Street, Cleveland 3, Ohio. Telephone: Henderson 1-7800.

Registered occupational therapist about September 1, 1954, as director of new OT program and teach orientation, theory, and application. \$4700.-\$5000. for approximately a ten month year. Qualifications, personal data, small photo, first letter. R. B. Witmer, Dean, University of North Dakota, Grand Forks, North Dakota.

Occupational therapist: Private 70-bed psychiatric hospital on Gulf of Mexico. Apply, stating salary desired, to Anclote Manor, P. O. Box 6, Tarpon Springs, Florida.

Occupational therapist, registered—for psychiatric unit in a general hospital. Write to Dr. R. Finley Gayle, Jr., Chairman, Department of Psychiatry and Neurology, The Medical College of Virginia, Richmond, Virginia.

Wanted: Registered or eligible registrant, occupational therapist. Senior \$3450 - \$4140; Junior \$2940 - \$3450 annually. Paid holidays and vacations, sick allowances, retirement provisions, civil service. State qualifications and experiences (experience not necessary). Apply: William B. O'Brien, M.D., Supt., State Sanatorium, Wallum Lake, R. I.

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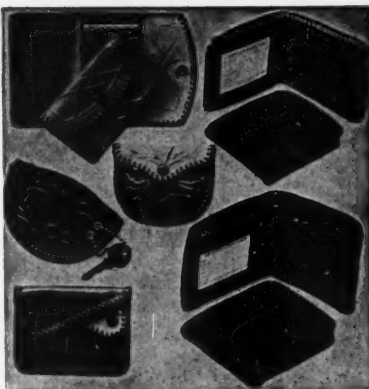
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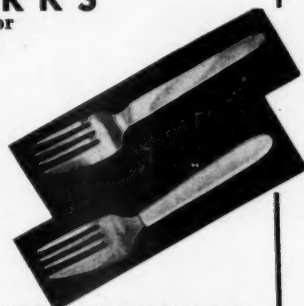
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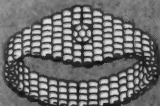
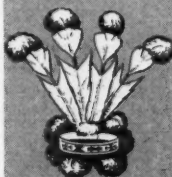
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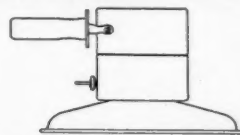
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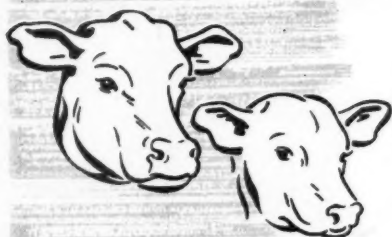
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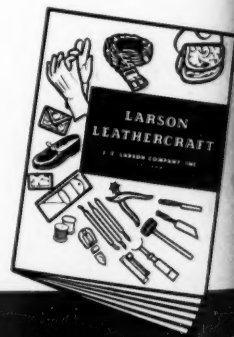
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